

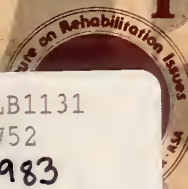
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Tenth Institute on Rehabilitation Issues

Functional Assessment

Virginia Research and Training Center

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Functional Assessment

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FOREWORD

This document was prepared by a Study Group of the Institute on Rehabilitation Issues. The Institute on Rehabilitation Issues is a cooperative effort by the National Institute of Handicapped Research, Rehabilitation Services Administration and the Council of State Administrators of Vocational Rehabilitation to develop resource materials on topics of common concern.

Overall objectives for the Institute on Rehabilitation Issues include identification and study of issues and problems that are barriers to optimal vocational rehabilitation services and the development of methods for resolving problems and incorporating solutions into state programs.

These objectives are carried out by bringing together competent and experienced rehabilitation personnel from all levels in a three stage process:

1. A Planning Committee selects the topics to be studied;
2. A Prime Study Group develops a draft document on the topic selected;
3. A Full Study Group reviews the draft document and recommends revisions.

This document resulted from such a process. (See appendices for listing of Study Group members.)

While the Institute on Rehabilitation Issues has existed only since 1973, it is a continuation of a program which has existed for over 35 years. Beginning in 1947 the Guidance, Training and Placement Workshop, through state and federal vocational rehabilitation agency cooperation, studied and explored topics in depth by means of small work groups. This work was continued by the Institute on Rehabilitation Services established in 1962 and currently by the Institute on Rehabilitation Issues.

This cooperative effort has over the years consistently produced quality training materials which are used extensively throughout rehabilitation. It is hoped this document continues this long-standing tradition.

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PREFACE

Why a book on functional assessment when the concept of functional assessment has been a part of the vocational rehabilitation process for years? The Prime Study Group believes that while the concept of functional assessment is not new it has not been fully understood or implemented within VR.

In the past, the assessment process has tended to focus on medical impairments and diagnoses. As the field of rehabilitation became more sophisticated, the rehabilitation model required a broader understanding of the client's needs, functions, and limitations particularly as they relate to factors that would enable or prevent him/her from becoming employable. The Study Group adopted this working definition of functional assessment which more adequately describes the process: An organized and comprehensive evaluation of a person's capacities, behaviors, and limitations which are relevant to his or her vocational potential.

This publication on functional assessment is directed to VR agency personnel, primarily rehabilitation counselors who have to conduct the assessments and administrators responsible of its implementation within the agency.

Chapter I will give you an understanding of what functional assessment is, why it is done and when to do it.

The rehabilitation counselor's role is discussed in the second chapter focusing on the benefits derived from functional assessment, and the problems or trade offs as functional assessment is implemented for the client.

Chapter III deals with administrative issues associated with implementation of functional assessment in a state agency and the program impacts that may be expected. Included in this chapter are a discussion of evaluation of the implemented functional assessment program and some of the relevant issues that should be included in such an evaluation.

The role of functional assessment in interdisciplinary rehabilitation is covered in Chapter IV, detailing the benefits, potential problems, and strategies for implementation.

Some future trends and issues are spotlighted in Chapter V. The Study Group identifies and discusses those areas on which they believe functional assessment will have the greatest impact in the coming years.

The final chapter describes and compares eleven functional assessment instruments currently in use in VR agencies. Based on information provided by the instrument developers, it is possible to evaluate each of these instruments in terms of its suitability for use in particular programs and situations.

Chapter I

FUNCTIONAL ASSESSMENT: PROCESS AND PURPOSE

Functional assessment is both a new concept and one that is quite familiar to rehabilitation. Despite its apparent simplicity, it involves complex issues. The matter of definition, therefore, deserves careful consideration.

In its state of the art study of measurement of functional limitations, indices (1979) concluded that agreement had not been reached on the meaning of the term functional limitation and created a working definition: "Functional limitation is (1) an inability to perform some life activity, (2) of relatively long duration, (3) caused by an interaction between an impairment and the environment, (4) related to one's vocational potential" (p. I-8). This definition is germane to the present discussion because functional limitation is part of the broader concept of functional assessment, for which an authoritative definition has yet to be formulated.

One way to approach the challenge of definition is to examine the term itself. "Assessment" derives from a French word meaning to sit beside or assist in the office of a judge. The dictionary definition of assess is "to determine the importance, size, or value of." A synonym of assess is estimate--to give a rough approximation, calculation, judgment or opinion. Thus, precision of the assessment process is not implied by the term itself. Assessment could range from a rough estimate or approximation to a determination of importance or value.

"Functional" comes from a Latin word meaning performance and a primary definition of function is "the acts or operations expected of a person or thing." In its verb form, synonyms of function include act, go, run, and work. The term functional assessment then implies an evaluation of behavior; more specifically, behavior that is central to one's life and purpose.

Several critical questions need to be addressed in building a definition of functional assessment:

1. What should be the focus of the assessment?
Delineation of a person's abilities,
identification of limitations, or both?

2. Should it recognize capacities (what the person can do), behaviors (what (s)he actually does perform), or potentials (what the person might be capable of doing following rehabilitation services)?
3. What specific areas of function are appropriate to include? Can some general boundaries be identified, e.g., relevance to work? Can a list of areas be agreed upon?
4. Should the scope of assessment focus entirely on the individual or should aspects of the environment be considered as well?
5. What form should the assessment take? How structured must an evaluation be? What is the relationship between the process of functional assessment and functional assessment instruments?

Let us examine each of these questions.

FOCUS OF ASSESSMENT. In rehabilitation we are trained to look beyond impairments to recognize abilities and strengths and to build on our clients' assets. Identification of special skills and resources as well as areas of normal functioning is essential in matching client abilities with job demands.

There are however, many reasons for taking careful notice of limitations. Eligibility for services from the state-federal vocational rehabilitation program requires a medically verifiable disability that constitutes a handicap to employment. Obviously, the enumeration of an applicant's assets would not be sufficient to meet this need. Additionally, a counselor must have accurate knowledge of an individual's total functioning in order to choose the appropriate services to overcome any problems or difficulties.

The conclusion that functional assessment must include evaluation of both strengths and limitations seems inescapable. This does not mean that two separate evaluations are needed because the absence of limitation in an area implies adequate functioning, an asset available for use in vocational planning.

BEHAVIORS, CAPACITIES, POTENTIALS. These terms refer to related but significantly different dimensions of individual functioning. Behavior simply refers to what a person characteristically does at the present time. Capacities means the current maximum performance of which the client is capable given the appropriate setting and motivation. Potential concerns aptitude, that is what the client might be able to do

in the future given sufficient rehabilitation services. It is essential that you be clear which of these dimensions is measured in any functional assessment.

Short term behavior samples such as psychometric tests may measure the limits of capacity. Longer samples in a work evaluation may tap typical behavior or might reflect optimal functioning if the client were motivated and able to maintain full involvement throughout. Accurate measures of actual behaviors may be obtained from family members, co-workers, and supervisors, or these persons could corroborate self-reporting by the client. Measurement of potential may involve aptitude testing or clinical judgments regarding the effects of proposed services on client functioning.

AREAS FOR ASSESSMENT. Theoretically, the areas that could be included in a functional assessment are almost infinite. A sample must be chosen based upon an understanding of human behavior and what is relevant to the goals of vocational rehabilitation.

In rehabilitation, assessment historically has focused primarily on the documentation of physical and mental impairments to determine primary and secondary diagnostic categories for eligibility decisions and, in many cases, what services would be provided. Several studies concerned with the development of functional assessment procedures (Crewe & Athelstan, 1981; Marsh et al., 1980) have described the difficulty in breaking away from this familiar medical systems approach. Functional assessment emphasizes behavioral patterns, so the spotlight should not be physical, mental, or emotional impairments but rather on how those impairments affect the person's performance. As obvious as this seems, the temptation to revert to categories like pain, depression, or quadriplegia is frequently irresistible.

Although medical labeling remains useful to physicians and allied health professionals, it poses a definite impediment to contemporary rehabilitation practice and to the multiple professional groups who provide today's broad array of rehabilitation services. Contemporary rehabilitation practice requires a nomenclature rooted in a description of what a person can do as well as the person's actual observable behavior.

If the old labels are unsatisfactory, the areas that are appropriate to include in functional assessment must be identified and organized. One possibility is to begin with the major dimensions of human ability--mental, physical, and psychosocial; or cognitive, affective, and behavioral; or more

simply, thinking, feeling and acting--and then determine how impairments in those dimensions influence capacity for work.

SCOPE OF ASSESSMENT. The focus of rehabilitation is on the individual client with efforts directed primarily toward providing services or devices to cope with or overcome a disability. However, as Wright (1980) stated so clearly, behavior is determined by both the person and the environment. Functional assessment nudges the rehabilitation practitioner toward an overt acknowledgment of that rather obvious fact.

The Comprehensive Needs Study (Urban Institute, 1975) provided a useful distinction between the terms impairment, disability, and handicap. A physical or mental problem or condition is called an impairment. Disability refers to the things such as walking or speaking that the person is unable to do as a result of the impairment. A handicap is the degree to which a person is disadvantaged by a limitation in a specific environment. For example, the inability to walk resulting in reliance on a wheelchair would cause little or no handicap in a fully accessible environment but would be regarded as a major handicap in an environment full of architectural barriers.

Moving functional assessment from the traditional classification and measurement of impairments toward measurement of handicaps proves to be difficult in practice because it is hard to predict the characteristics of the environment in which the person will be existing. Suppose, for example, that a counselor is doing vocational planning with a client who has a brain dysfunction (impairment) with the resulting disability of inability to read. If (s)he wants to attend college, the dyslexia represents a much greater handicap than if (s)he were to take a job as an assembler in a factory where demonstrations at the workplace would be sufficient training. Similarly, if functional assessment were being done with a mobility-impaired person who has not decided whether to return home to a rural community or to live in an urban area, the degree of handicap would be difficult to determine until the environment is chosen.

In assessing handicap, individual counselors or evaluators probably will make different assumptions about future environmental conditions and arrive at contradictory conclusions. Thus, in the interest of reliability, functional assessment may need to look primarily at disability rather than handicap, supplemented by whatever environmental information is available. Or, functional assessment might focus on the client's current performance in a particular environment realizing that a new assessment might be necessary if circumstances were to change. Whatever the approach, functional

assessment should be concerned with capacities and limitations that result from the interaction between a person and the environment.

FORM OF ASSESSMENT. Many counselors have expressed confusion about all the recent attention being given to the concept of functional assessment. They exclaim that it is no different than what they always have done with their clients. While it is probably true that most counselors always have paid attention to their clients' abilities and limitations, the term functional assessment now refers to a more systematic process. It also implies a more deliberate linking between the functional information and the vocational plan. While use of functional assessment inventories is not required, functional assessment does demand that one use an orderly, reliable, and validated method of some kind.

Depending on the counselor's particular goals, one or another of these inventories or formal methods can be employed to make the process more efficient or effective. But the counselor may develop his or her own method for achieving those ends; an individualized approach to functional assessment rather than a standardized instrument.

While it may be tempting to think of functional assessment as the completion of a test or inventory, doing so ignores the evaluation process which probably is more important than the resulting summary. At the heart of functional assessment (and of counseling itself) is understanding of the client by the counselor and a growing self-knowledge by the client. Part of the understanding is empathic acceptance between human beings, and part is the objective understanding that grows out of the diagnostic process. Diagnostic assessment may draw upon various techniques, but it implies a deliberate and systematic approach.

Drawing together and simplifying the foregoing discussion, the following working definition of functional assessment is offered:

An organized and comprehensive evaluation of a person's capacities, behaviors, and limitations which are relevant to his or her vocational potential.

USERS OF FUNCTIONAL ASSESSMENT INFORMATION

The indices study (1979) identified multiple user groups with special needs for functional information which included:

1. VR counselors and clients, to provide structure for comprehensive evaluation of clients and a basis for eligibility determination, goal setting and rehabilitation plan development.

2. State VR agency personnel, to assist with tasks such as program planning and evaluation, improving case management, and setting priorities.
3. Federal agency administrators, for describing the population of persons receiving VR services and the effects of those services.
4. Researchers, to provide reliability in describing and classifying subjects in studies of rehabilitation effectiveness.
5. Counselor educators, to provide a framework for teaching students to recognize and respond to the complex needs of clients with severe disabilities.

The multiplicity of user groups presents both problems and advantages in the area of functional assessment. On the one hand, the groups provide a broad base of support for the activity. But the varying needs of the groups require different approaches to the collection of information which could lead to conflict between groups.

Although the indices study was concerned with functional limitations rather than the broader concept of functional assessment, their discussion serves as a concise and accurate introduction to the uses of a functional approach. Subsequent chapters in this publication will cover more expansively applications by counselors, administrators, and others on the rehabilitation team.

PURPOSES OF FUNCTIONAL ASSESSMENT

Until the mid 1970's vocational rehabilitation was a relatively stable program with adequate funding, program growth, and bottom line accountability (successful placements). The Rehabilitation Act of 1973 and its subsequent amendments initiated program changes that constitute significant statements regarding the substantiality of services, the composition of the VR client population, and client participation in the rehabilitation process. Specifically, those changes included:

- * service priority given to the severely disabled
- * elimination of services to individuals whose only disability is a behavioral disorder
- * extension of the length of time for successful closure in employment from 30 to 60 days

- * the requirement for the Individualized Written Rehabilitation Program
- * measurement and evaluation of programs to determine effectiveness in achieving stated goals

Despite these changes, the rehabilitation casework process as reflected in the counselor's role and involvement with clients, has remained essentially the same. Documentation requirements have increased and forms have been modified but the counseling staff within the state-federal program has been largely untouched by projects supporting innovative approaches to service delivery.

Functional assessment may prove to be a major factor in meeting the increased demand for program and professional accountability. It can impact significantly on both the VR system and on counselor accountability in terms of those served, those who govern the program, and the counselors themselves, as professionals.

Functional assessment, which necessitates client involvement, can cut across the areas of eligibility determination, goal development, and measurement of progress bringing natural integration into the process as well as support for decision making. It can provide a foundation for developing various hypotheses and a yardstick of baseline information against which client gain can be measured. It is not something "done to" the client and forgotten nor is it only utilized once. It serves as a mechanism to increase the likelihood of equitable decisions and service provision for clients.

This systematic approach to service delivery can enhance the professional stature of the counselor as (s)he becomes the possessor of additional skills. In the role of assessor, the counselor can benefit from directly administering the assessment to the client or by synthesizing, in a systematic way, the information elicited from other disciplines.

Current expectations for more intensive, comprehensive services provided to more severely disabled clients with fewer dollars gives further emphasis to the important role of the counselor in the assessment process. Although the counselor cannot supplant the medical, psychological and vocational specialist evaluations (s)he can utilize those disciplines more appropriately by securing only those consultations necessary to answer specific client needs.

Administrators can support functional assessment solely on the basis of a more rational, responsible, integrative and cost-effective approach to casework by field staff. But there are potentially more global program benefits from utilizing functional assessment information. Chapter III discusses how

this kind of information, integrated into the agency's management information system, yields program descriptors which can impact significantly on program planning, evaluation, and resource allocation functions.

The importance of active, rather than passive, administrative support in the installation of functional assessment cannot be overemphasized. The amount of administrative support provided to this effort can be predictive of its acceptance and the success of utilization. Administrators should be knowledgeable about the concept of functional assessment and about specific instruments before endorsing their use within the agency. As the counselor is the individual who is the prime user and consumer of functional assessment the current counselor work load, e.g., caseload size and specific documentation requirements, must be considered in choosing which functional assessment tool(s) are most appropriate.

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Chapter II

COUNSELOR ISSUES

As many of the benefits of functional assessment accrue to the counselor and client (indices, 1979), this chapter is addressed to those key participants. The practice of functional assessment may require changes in a counselor's customary and traditional tasks. Thus, the potential benefits from functional assessment need to be weighed against the inevitable trade-offs.

PROFESSIONAL IDENTITY

Many of the techniques, procedures, and skills of rehabilitation counseling are used by other helping professions, e.g. vocational counseling, information gathering, purchasing services. Functional assessment, however, is a process unique to rehabilitation counseling, one that meets established criteria for professional practice, i.e., production of valid, reliable, quantifiable results. Thus, one attractive side benefit from the use of functional assessment is its contribution to one's sense of professional identity.

The characterization of functional assessment as an intuitive art is often touted in the field of rehabilitation. Unfortunately, intuitive arts do not lend themselves to description or measurement. In a time of increased accountability and competition among agencies and professions for funding, clearly defined areas of competence and measurable outcomes are essential. Functional assessment helps meet these demands by augmenting sound counselor intuition with quantifiable, reliable findings.

The price or trade-off for this professionalism consists of the installation of a more comprehensive, systematic approach to client evaluation. Use of the functional assessment process as defined in this document (an organized and comprehensive evaluation of a person's capacities, behaviors, and limitations which are relevant to his or her vocational potential), imposes a degree of structure and rigor that may not be typical of customary counselor practice. Defining and systematizing client evaluation demands reliance on more than intuition if the client is to benefit through a more professional practice.

ORGANIZING INFORMATION

Any counselor who has obtained conflicting information about a client or has been confronted with a complex array of client problems will appreciate the role functional assessment

can play in organizing information about client characteristics.

Many of the functional assessment instruments reviewed in Chapter VI provide a structured set of questions to ask the client or a specific set of issues to evaluate. Such questions not only serve as a clearly defined starting point for client evaluation but also have a reliable and valid rationale for their selection.

Some functional assessment instruments help the counselor categorize and draw conclusions from client information. For example, the Preliminary Diagnostic Questionnaire clusters questions about withdrawal, anxiety, depression, and aggression into a single, preliminary assessment of emotional functioning. The Functional Assessment Inventory groups evaluations of exertion, stability, and endurance into a single score for physical condition and the relative weight of this area can be compared with other areas such as economic disincentives.

Functional assessment instruments are not a panacea. While they provide a starting point and organizing principles for client evaluation, they are not designed to provide precise cut off points or simple yes/no answers. These instruments help identify trends, formulate statements of client assets and limitations, identify areas where more information is needed from other specialists or from the client, and provide a basis for vocational planning.

COMMUNICATION WITH OTHER PROFESSIONALS

A counselor's capacity to measure and objectify client information through the functional assessment process enhances communication with other professionals. For example, identifying specific deficiencies in time management using the Functional Assessment Profile allows the counselor to be more explicit when referring a client for personal adjustment services. Apparent inconsistencies between the client's Preliminary Estimate of Learning and Psychomotor scores on the Preliminary Diagnostic Questionnaire may lead the counselor to ask more specific questions of a psychologist. Observed interpersonal problems noted on the Scale of Employability can help formulate specific questions or requests of the client's therapists.

Increased communication sounds quite alluring but the trade-off may be more case recording. While most of the instruments do not require extensive writing--some use only simple numerical ratings--many agencies require the counselor to justify selection of the particular instrument and summarize the findings. Although such case recording is not an intrinsic part of functional assessment, concise case summaries are a part of professional case management.

DIRECT CLIENT CONTACT

Functional assessment may require more counselor time but before rejecting the idea counselors should consider yet another potential benefit--increased direct contact with clients. Many functional assessment instruments not only provide for structured interviews but also for observation of client behavior, e.g., posture, eye contact, foot tapping.

Increased contact allows the client to see the counselor directly providing a service. After an exhaustive effort to assist a client into employment, how disconcerting and frustrating for a counselor to later hear, "They didn't do a thing for me!" Such statements are less confounding if you remember that the role of coordinator is often an invisible one. A client is more likely to work collaboratively to achieve employment when perceiving the counselor as providing a service (Pietrofesa et al., 1978).

Increased time together proves beneficial, of course, only to the extent the counselor applies interviewing, information giving, and problem solving skills expertly.

While feedback is not a required part of most functional assessment instruments, the process of functional assessment requires that the counselor check acquired data against that from other sources--and certainly the client will be one of those sources. Effective feedback also contributes to the client's improved understanding of capacities, behaviors, and limitations.

Although functional assessment instruments may require more counselor time, this time will be repaid by more accurate and efficient decision making.

COST CONTROL

Counselors faced with shrinking case service budgets and rising costs can use functional assessment to gain better control of diagnostic and service costs. The individual instruments themselves represent minimal direct costs (although the indirect cost of counselor time must be considered) but significant reductions could result from fewer and less comprehensive specialist evaluations.

Completing a Preliminary Diagnostic Questionnaire, for example, may provide enough information to eliminate the need for a psychological test battery. The Functional Assessment Inventory may help define your diagnostic questions more clearly and reduce the number of specialty exams needed. Using the Vocational Behavior Checklist to assess a client's progress

and document change during personal adjustment training helps the counselor make a more objective decision about when to end the program.

These savings also translate into client benefits. As the diagnostic measures become more prescriptive, client participation in unproductive or trial and error diagnostics is reduced.

CASE MANAGEMENT ISSUES

Intake

Functional assessment can and frequently does occur during intake because of the comprehensive nature of the information secured. Cases where unexpected family opposition or unidentified functional limitations result in failure are painful reminders of the value of comprehensive evaluation.

But the comprehensiveness of the evaluation could also create a trade-off of more time than usual spent in diagnostic status when the assessment reveals hidden problems or assets requiring evaluation before a viable rehabilitation plan can be developed.

Eligibility Determination

Developers of functional assessment instruments (Crewe & Athelstan, 1981; Marsh, et al., 1980) have noted that the medical model is not an effective framework for the VR counselor in determining the existence of a vocational handicap. Two people with the same impairment can possess capacities and limitations that are widely disparate; the medical diagnosis contributes little to the counselor's understanding of each client.

An alternate framework within which specific behaviors and skills can be related to employability would better serve the counselor. Functional assessment can provide such a framework for looking beyond labels to behaviors, capacities, and limitations, clearly defining the client's vocational handicap and assuring compliance with federal regulations requiring documentation of the handicap.

Vocational Planning

Functional assessment allows the logical steps in the vocational planning process to proceed with potential problems identified early and addressed. Functional assessment information contributes to subsequent steps in the planning process by providing more information in areas such as client's physical tolerance, interpersonal skills, mobility capabilities. Also, client assets and limitations can be

identified and used in defining the vocational handicap, targeting related service needs, and matching client characteristics to job demands.

The use of functional assessment information for vocational planning requires skill in interviewing, counseling, gathering and interpreting client data, and time management.

Case Closure

In the rehabilitation process you need to not only assess assets and liabilities but to measure the progress of the client toward established objectives. Certain functional assessment instruments are designed specifically to measure client gain if administered early in the rehabilitation process as diagnostic and prescriptive tools and readministered later to determine client progress toward goals.

Presently, only one measure of counselor performance--rehabilitated closures--is universally recognized. It would be rewarding for both counselor and agency if it could be demonstrated objectively that a client closed as not rehabilitated (status 28 or 30) did make measurable gains.

Rehabilitation Rates

When a functional assessment instrument is used, the potential exists for improving rehabilitation success rates. As specific diagnostic information will be available prior to eligibility determination, more accurate decisions by the counselor are possible resulting in a reduction in the number of clients closed as not rehabilitated.

COUNSELOR DESIGNED FUNCTIONAL ASSESSMENT SYSTEMS

Working independently may be the only way for a counselor to improve the practice of functional assessment or begin to use functional assessment instruments. But intrepid, individual effort is fraught with problems. Some of these problems can be minimized if the counselor begins by describing to the supervisor what will be done differently, its rationale, the expected results, and anticipated trade-offs.

Whether the counselor chooses to use functional assessment instruments or elects a self-designed system, the important consideration is a comprehensive and systematic approach to client evaluation and organization of the data. This approach would include:

- * analysis of client characteristics and goals
(examples of characteristics include aptitudes, achievements, skills)

- * selection of questions or procedures to gather information about these characteristics and goals
- * a plan for organizing and analyzing the data
- * a method for testing the accuracy of conclusions
- * a plan for longer-term validation or confirmation of the process.

Counselors should begin a solo venture into functional assessment by using one of the already developed instruments which provide content validity, reliability, and a structured approach to gathering and organizing data.

If not using an instrument the counselor may rely on questions or checklists developed from experience, or on the revision or rearrangement of questionnaires from related disciplines. Questions can also be developed under the major categories considered when evaluating a client (e.g., medical, social, psychological) or the most problematic areas of client behavior (e.g., motivation, disincentives). For example, the disincentives category might include questions such as, "How much money do you need to earn to make it worthwhile to work?" "What services or benefits would you lose if you went to work?"

A test of comprehensiveness must be applied to an individualized system to ascertain that all significant areas of client functioning have been covered. A determination should be made that questions have been ordered logically, and that an appropriate method for gathering the data (e.g., filling in the blanks on a questionnaire, writing a narrative summary) has been selected.

A plan for organizing and analyzing the data will be necessary. One simple strategy is to organize information by determining whether it can be regarded as a negative or positive factor in the client's rehabilitation. The counselor can then assess the negative factors and decide if they can be influenced positively through rehabilitation services.

Client data should be checked for consistency within and between categories. What is the significance of a discrepancy between a client's report of work performance and a former employer's report? Most of us would check such a discrepancy but in a functional assessment process the data are consistently and comprehensively cross-checked for agreement as well as discrepancy.

Ultimately, the counselor will want to examine the effectiveness of his/her individualized process for gathering, organizing, and analyzing data. Does the process result in greater client success? Fewer plan amendments? Less time in

diagnostic status? Consultation with the agency's program evaluation or research staff can provide you with more formal methods to validate the process.

Use of either the functional assessment instruments or a counselor-designed functional assessment method demands a change in how clients are served but with a number of significant benefits:

- * stronger professional identity
- * improved organization and structure
- * measurable, objective data as a basis for decision making
- * improved cost control
- * an objective basis for service planning
- * the opportunity for more accurate and goal-directed feedback to clients.

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Chapter III

ADMINISTRATIVE ISSUES: BENEFITS AND IMPLEMENTATION

Administrators need to identify the results they would like to realize from functional assessment and then select the instruments and procedures to accomplish those ends. These changes or adaptations in functional assessment practice will impact the entire rehabilitation process. Ideally, these changes would be anticipated and plans developed to deal with them.

This chapter focuses on the benefits of functional assessment from an administrative perspective and the administrative issues related to the installation of a functional assessment system.

BENEFITS

PROGRAM ACCOUNTABILITY

- * Functional assessment instruments can improve the measurement of the quality and quantity of successful rehabilitations.
- * Important aspects of client progress can be measured even though the client remains unemployed.
- * Independent living programs can be evaluated.

Administrators can use summary information from functional assessment instruments to respond to inquiries from legislators and consumers. This information can cover a wide range of data such as client characteristics, service needs, residual physical capabilities, and disabling conditions. Critically important for program accountability purposes is information on the level of client functioning before and after the provision of rehabilitation services.

While the need to measure the full range of positive changes attributable to rehabilitation long has been recognized by counselors, consumer and legislative groups have shown little interest in positive changes involving small units of behavior. For example, after completion of an IWRP the client can write a simple sentence, retrieve an object from a bedside table, or add and subtract dollars and cents. These same groups however are interested in major improvements toward financial and personal independence: As a result of the rehabilitation process, are more clients employed? Have more clients moved from a state institution to their own home or apartment? Can more bedridden clients now travel around their

neighborhoods? These improvements in employment, residency, and mobility can significantly reduce public expenditures and therefore are of more interest. Thus, currently only changes in financial and employment status are systematically measured and reported at the national level.

Recently, the Council of State Administrators of Vocational Rehabilitation (CSAVR) endorsed as part of the revised R-300 client data form the voluntary use of a functional assessment scale to measure non-vocational gain. The CSAVR instrument is similar to both the Life Functioning Index developed by ABT Associates and the Status Indicators Scale of the Rehabilitation Indicators developed at New York University. These instruments permit administrators to report objective and socially important changes brought about by rehabilitation services even if the goal of employment is not reached immediately.

The measurement of client change can also be used as an assessment of progress in independent living programs. Measurement has a way of focusing activity and therefore is useful in structuring new and untried programs.

FORECASTING AND PLANNING

- * Probability of successful rehabilitation can be estimated given the functional characteristics of the clients.
- * More reliable estimates can improve planning.

Data from functional assessment instruments can be used to help administrators predict successful rehabilitation. Several of the instruments (e.g., the Preliminary Diagnostic Questionnaire and the Functional Assessment Inventory) allow for the prediction of success of a specific client based on the success rates of similar populations of clients whose history has been tracked previously. Administrators need to be able to predict the likelihood of client employment or the probability of functional improvement in various areas, such as mobility and communication. As predictive information is validated, the data from functional assessment instruments will allow caseload composition and resource allocation decisions to be handled more successfully based on the characteristics of clients currently served.

The difference between the predicted success rate and the actual success rate during a given period of time is an important indicator of program productivity. While the characteristics of clients and budget constraints cannot be controlled, administrators can influence the adequacy of services, the effectiveness of staff and the responsiveness of policies governing budget and staff.

With the introduction of functional assessment instruments, changes in the severity of handicapping characteristics of clients can be measured accurately. The impact these changes have on agency productivity is then separable from the impact of changes in management policy and staff skills. Handicapping characteristics change over time. Substantial differences in the handicapping characteristics of clients may exist from office to office. Therefore, differences in productivity among VR offices cannot automatically be attributed to differences in counselor or manager effectiveness. These differences could, in large part, be due to the functional limitations or capacities of the clients being served.

Most administrators are aware that disability alone does not determine the degree of case difficulty or service demand presented by a client. Accurate information about the functional capacities, functional limitations, and service needs typical of various disability groups allows administrators to plan budgets and caseloads based on the projected demands of these groups for time and direct services.

COST ACCOUNTING AND BUDGETING

- * If clients' functional characteristics are known, it can be estimated how many clients at what cost can be served over the next fiscal year.
- * Total funds expended to date on clients including non-direct cost items such as staff time spent on counseling, placement and management, can be estimated.
- * Additional money required to serve the expected caseload including non-direct costs can be estimated.

While most agencies can track the costs of directly provided or purchased services, two cost centers remain problematic--counseling and placement, and administration. Clients with different functional limitations and characteristics place distinctly different demands on counseling and placement time. Once agency-wide use of a functional assessment instrument is completed, the agency can measure the differential use of counseling and placement time by clients with varying degrees of functional limitations and capacities. Time studies of counselor activity would be of considerable importance for gathering this data.

As total administrative costs are known, these can be allocated in the same proportion as counseling and placement costs, i.e., if 10 percent of counseling and placement costs are required for a particular type of functionally limited client, then 10 percent of the administrative costs can be allocated to that same type of client. As counseling,

placement and administrative costs constitute an average of 50 percent of all expenditures in vocational rehabilitation agencies, allocation of these costs to a specific client group would be an important forward step in budgeting and planning.

Once all the components of the cost equation are measured--counseling and placement, administration, direct services, purchased services, and similar benefits--a reliable cost can be calculated for each client in the caseload. These data allow the administrator to address more accurately questions such as:

"How much money has the agency expended to date on currently served clients?"

"How much additional money will be required (given the composite of client functional limitations and capacities) to serve the current caseload during this fiscal year?"

"How much money is left in this fiscal year's budget once the above two figures are subtracted?"

"How many clients, with what functional characteristics, can be accepted as applicants (an order of selection priority problem) for the rest of the fiscal year?"

"How will changing the mix of functional limitations affect demand on staff time?"

CASELOAD MANAGEMENT

- * Functional assessment has an impact on each stage of the rehabilitation process.
- * Functional assessment affects the time a client spends in the rehabilitation process.

Functional assessment affects all stages of the rehabilitation process, but it is perhaps most impactful during the diagnostic phase by providing information to the counselor for problem solving and identifying service needs leading to successful rehabilitation.

Initial Referral--Functional assessment instruments are not developed or designed for the purpose of screening out clients. As referral is the beginning of the rehabilitation process, the use of functional assessment instruments can help identify levels of physical, cognitive or affective functioning that would assist a counselor to decide whether or not a referral is appropriate.

Diagnostic Study and Eligibility--Many of the functional assessment instruments are designed to be administered by the counselor. The time required for administration varies from 10 minutes for the Functional Assessment Inventory to three hours for the Functional Assessment Profile. In many agencies, caseload size would preclude counselors using the more time-consuming instruments for every client. The time counselors spend in administering and interpreting functional assessment instruments is time away from their other tasks. But while additional time is required for administration, various benefits from the use of the instruments become apparent.

Information gained from the use of assessment instruments during the diagnostic phase include identification of client capacities, limitations, or problems that may influence the course of subsequent planning. While there is no guarantee that all significant client characteristics will be identified, a comprehensive and careful assessment of the client at the beginning of the rehabilitation process may eliminate disruptive surprises later.

By gathering specific information and observing client behavior, the counselor can formulate more specific questions of diagnosticians, e.g., consultants, physicians, psychologists, physical therapists. Also, careful selection of functional assessment instruments can reduce the cost of diagnostic studies by eliminating the need for additional specialist examinations. The Illinois rehabilitation agency is conducting a study evaluating the effects of functional assessment instruments particularly on diagnostic costs. Their early data suggest an average savings in diagnostic costs of \$50.00 per client when the PDQ is used.

In establishing eligibility, the language from functional assessment instruments can be used to define vocational handicaps and, where normative data is available, can help predict feasibility.

Case Planning--Functional assessment instruments provide counselors with the ability to identify and quantify not only client capacities but also client limitations and significant environmental factors. These factors must be considered when selecting a vocational goal and determining the services that will be provided. Accurate and comprehensive assessments should lead to more successful planning and ultimately more successful rehabilitations. To date, however, there are no objective data to support this theory.

Time in the Rehabilitation Process--When a counselor assesses a client systematically, more areas are probably included in the assessment than might otherwise have been considered. The

analysis of this additional client information may complicate the decision making process since the counselor has to deal with a broader range of client strengths, needs, and limitations. Functional assessment may increase the time spent to complete the diagnostic study.

The Maryland rehabilitation agency found that the use of a functional assessment instrument (a modified version of the FAI) increased the time from status 02 to IWRP development, while early findings from the Illinois agency (using the PDQ) showed an 18 percent decrease in time. While there is no agreement on this matter, it is hoped that the time devoted to functional assessment in the rehabilitation process will be time spent more effectively and efficiently.

IMPLEMENTATION

The following steps are recommended when agencies plan to introduce functional assessment instruments or revise the functional assessment process.

DEVELOP COMMITMENT OF TOP ADMINISTRATORS

The first step in the implementation process should be a review of the primary anticipated benefits from functional assessment to counselors and administrators, i.e., improved decision making and client gain. As discussed previously, additional benefits relate to program accountability, forecasting and planning, cost accounting and budgeting, and caseload management.

Top administrators must understand thoroughly the concept of functional assessment, the advantages and disadvantages of using a system, what information is to be obtained and how to use it, and how best to implement training for counselors and all levels of staff. Administrators must be sold on the concept of functional assessment, the selected instrument(s) and procedures, and then solidly support installation or revision of functional assessment through the chain of command to the field staff. Counselors are very cognizant of the degree of support administrators lend to a particular activity. The more active that support, the higher the probability of success at the counselor level. Similarly, administrators will have difficulty selling a concept to field staff if they themselves are not knowledgeable of the advantages and disadvantages of the proposed change.

SET OBJECTIVES

Once implementing or revising the functional assessment system is accepted by top administrators, the next logical step is defining the specific goals and objectives to be accomplished. If the agency's current system of functional

assessment does not provide sufficient information about clients' functional characteristics, decisions must be made on exactly what information is desired and for what purposes it will be used. The data obtained must be in a form which can be retrieved and evaluated at specified stages of the rehabilitation process.

All rehabilitation counselors have the same charges: to obtain diagnostic information, determine eligibility, develop a vocational plan (IWRP), and successfully return their clients to work. But how counselors use functional assessment to meet these charges will vary widely--as will the understanding of the concept of functional assessment.

Client information from functional assessment may benefit the counselor in synthesizing client information and making predictions. Administrators may value how that information affects counselors' overall case management. For instance, an agency's desire to determine eligibility more accurately will dictate different functional assessment methods and procedures than those required if the desire is to reduce the amount of counselor time spent on the diagnostic process.

When planning the implementation of functional assessment, administrators must set objectives designed to meet the agency's needs. A needs assessment survey could assist in identifying the critical areas for improvement. The list below can be a starting point for such a survey:

1. Improve caseload management
2. Reduce case service costs
3. Measure changes in client functioning as rehabilitation process progresses
4. Insure quality services to clients
5. Predict needs of client population
6. Increase number of successful clients

CHOOSE INSTRUMENT(S) OR SYSTEM

Agencies that introduce functional assessment instruments into their everyday information-gathering efforts must standardize, computerize, and analyze the information if they are to gain administrative benefit from the use of these tools. Though there is considerable initial effort and cost associated with the adoption of a process that involves standardizing, computerizing, and analyzing functional assessment information, the management of vocational rehabilitation agencies will continue to be an inexact science without it.

In most states, there has been little attempt to implement functional assessment systematically. One possible source of help is the recently funded Research and Training Center at West Virginia University devoted to seeking solutions to key management problems facing vocational rehabilitation agencies. Since agencies face considerable difficulty merely introducing and training their counseling staff in the use and interpretation of functional assessment instruments, cooperative effort between the Research and Training Center and agencies interested in the administrative benefits of functional assessment information could contribute a substantial body of research, thus helping to break the all too frequent hiatus between research and practice.

There is still disagreement on the advisability of using a single standardized functional assessment instrument in a given state agency. Although such standardization provides important management data, the disadvantage is that no single instrument meets the needs of all clients or of all counselors. One possible compromise is for agencies at the state or federal level to prescribe the use of two or three assessment instruments to meet management information needs. Counselors would have the option to choose any of these instruments but all clients would be assessed using at least one of them. For more in-depth diagnostic or case planning needs, counselors would then have wide latitude in selecting other available assessment tools.

TRAINING

Initially, a counselor may be exposed to one or more functional assessment instruments but effective training and relevant information about the instruments are necessary before the counselor can accept the usefulness of the concept. Resistance to change will always be present when a new strategy is introduced. Unless practical ideas and techniques are highlighted in the initial presentation, the counselor is not likely to change current practice and the potential benefits from functional assessment are lost.

Counselors must understand how changes in their approach to functional assessment can improve their existing information-gathering procedures. They must be convinced that functional assessment will enable them to manage their caseloads more adequately. This is particularly true of experienced counselors who already know how to obtain valuable functional assessment information but may be able to perform more effectively with the assistance of a new tool.

Training sessions on the concept of functional assessment or on specific functional assessment instruments, will probably be most successful when conducted for small numbers of counselors where the trainees can feel more comfortable to ask

questions and participate freely. Rationale, procedures, and expectations should be thoroughly delineated and ample time allowed for discussion.

PILOT STUDY

If the decision has been made to use a particular functional assessment instrument(s), using a single office to test training and implementation in a pilot study is an approach that often conserves time and resources. As a relatively small number of counselors would be participating, the flow of data can be monitored more easily. In this fashion, the particular instrument chosen could be evaluated for usefulness and effectiveness before agency-wide implementation occurs. If the desired results are not obtained, an analysis could identify the issues to be addressed and possible solutions to correct the problems. At the end of the pilot study, the training package could be modified for statewide implementation.

EVALUATION

To date, most vocational rehabilitation agencies that have introduced functional assessment instruments are not able to answer the question, "Was it worth all the cost and effort?" For example, implementation of a particular functional assessment instrument may result in an increase in case service costs but also an increased ratio of successful rehabilitation. Service costs might increase because a more comprehensive array of services was provided to meet identified client needs, but better meeting of client needs might result in increased success.

Clearly however functional assessment is implemented, results must be evaluated. The program evaluation standards published by the Rehabilitation Services Administration could provide the framework for assessing issues of coverage, efficiency, impact and compliance:

- * Coverage involves those questions that assess the extent to which there is a fair and equitable distribution of resources among sub-state geographic districts and/or disability groups.
- * Efficiency questions assess the extent to which services are provided in the least time and cost.
- * Impact assesses the extent of successful closures.
- * Compliance questions assess the extent to which the above have been accomplished within state and federal regulations.

The decision to use a standardized functional assessment instrument should be based on the extent to which it can address the above interdependent issues. Such interdependency requires examining the consequences of changing performance in one area, say coverage, and the resulting impact on the others.

Too often management decisions to introduce or abandon a new strategy, such as functional assessment, are based on personal preference, salesmanship, or provoked by a crisis. Certainly all three of these factors have played a role in the implementation of functional assessment in state agencies. Some of the criteria needed to assess the consequences of introducing functional assessment are measures of the extent to which the critical objectives listed previously have been met:

1. Improve caseload management (compliance)

Have ineligibility rates been lowered?

Are more appropriate referrals being made for clients classified as ineligible?

2. Reduce case service costs (efficiency)

Is mean time from 02 to 10 reduced?

Is mean time from 10 to 26 or 28 reduced?

Is mean time in extended evaluation (06) reduced?

Have mean diagnostic costs been reduced?

Have mean case service or total costs for 08s, 26s, or 28s been reduced?

3. Measure changes in client functioning

What changes are showing up in the data analysis? (impact)

Are these the changes listed as sub-objectives in the IWRP? (impact)

Are changes similar throughout the state for similarly functionally limited clients? (coverage)

4. Insure quality services

Do service plans reflect the functional needs of clients? (efficiency)

Are clients who receive similar services from different providers achieving similar improvements? (impact)

5. Predict needs of clients (efficiency)

Are predicted needs for services reflected in actual provision of services?

Are predicted costs reflected in the actual cost of services provided?

6. Increase number of successful clients

Are more clients closed into competitive employment? (impact)

Are more clients achieving improvements in their non-vocational areas? (impact)

Are more case service dollars available? (efficiency)

Are the clients closed into sheltered employment appropriately placed? (compliance)

Do more clients leave sheltered employment for competitive employment? (impact)

Many of these questions could be better answered through cooperative research between state agencies and the National Institute of Handicapped Research. In any event, there is a need for agencies to plan carefully for the installation of functional assessment instruments in order to evaluate their impact, fulfill their management potential, and facilitate their introduction into other agencies.

FUNCTIONAL ASSESSMENT IN THE
REHABILITATION PROCESS

<u>Rehabilitation Process</u>	<u>Use</u>	<u>Impact</u>	<u>Comments</u>
Screening	Use to: - identify current level of applicant functioning. - predict probability of successful rehabilitation - identify limitations and capacities. These data can be used as tools to manage intake and insure a desired mix of client characteristics on caseloads.	Potential to reduce number of unsuccessful closures by screening out clients with low probability for success. Potential to increase counselor efficiency through balanced assignment of cases (cases could be assigned based on extent of limitations, breadth of need, etc.)--this is an untested hypothesis.	Most developers of functional assessment instruments insist they should not be used alone to screen applicants in or out of system.
Intake	If administered by the counselor, can increase interaction between counselor and client.	Increased time required for intake (range 5 minutes to 3 hours). Increased efficiency if diagnosis is tailored to specific client limitations. Client may view use of functional assessment tool and interpretations as a direct service--this may result in increased client satisfaction and cooperation. (These are untested hypotheses.)	
Diagnosis	Can be used by counselor, evaluator, or a counselor specializing in intake and diagnosis. Several of the measures are designed to facilitate communication between rehabilitation counselors and other professionals (e.g., O.T.'s, physicians). Measures can identify: - current level of functioning - functional capacity and limitation - service needs	Can reduce cost of purchased diagnostic measures. (Illinois found diagnostic costs reduced an average of \$50/case when PDQ was used.) Reduce time in status (Illinois found average time in O2 dropped from a state average of 4.7 months to .6 months in the PDQ project office.) Can increase the time spent with clients by individual counselors. Can increase the number and range of problems, needs, and limitations, identified.	
Planning	Use to identify: - functional limitation and functional capacity (to match with job demands, service needs, attitudes toward work, values). - baseline data against which change can be measured.	Can increase accuracy in identifying client needs, problems, limitations, capacities.	Many measures do not consider the same factors used in vocational information/exploration systems.
Plan Initiation	Measure progress toward objective. Identify client problems, limitations.	Measure progress toward objective. Identify client problems, limitations.	
Closure	Measure client change or gain.	Can provide data on client change or gain.	

Chapter IV

FUNCTIONAL ASSESSMENT IN INTERDISCIPLINARY REHABILITATION

Functional assessment as a systematic process can be used by a broad range of rehabilitation practitioners to identify client capacities and limitations throughout the rehabilitation process. In addition, as a measurement system it is capable of providing detailed and comprehensive information about a client's rehabilitation progress and outcome. Both conceptually and practically, functional assessment has utility and provides benefits to the professional staff who make up the comprehensive rehabilitation community, e.g., rehabilitation counselors, physicians, OTs, PTs, psychologists, nurses, psychiatrists.

Functional assessment procedures provide a means for the diverse range of rehabilitation professionals to work together as an interdisciplinary team delivering needed services designed to facilitate gainful employment. To understand the practical role played by functional assessment, you need to be clear on the value of interdisciplinary rehabilitation practice as well as the substantive difference between interdisciplinary and multidisciplinary activities in rehabilitation.

Melvin (1980) addressed the difference between multidisciplinary and interdisciplinary activities drawing the following distinction:

Multidisciplinary: This refers to activities which involve the efforts of individuals from a number of disciplines. These efforts are discipline-oriented and, although they may impinge upon clients or activities dealt with by other disciplines, they approach them primarily through each discipline relating to its own activities. For example, an individual requiring rehabilitation might receive services from Physicians, Physical Therapists, Occupational Therapists and so forth, and through these efforts, experience results representing the sum of each discipline providing its own unique activity, rather than an outcome which represents more than this simple sum. To operate in this setting, one need only know the skills necessary for one's own discipline.

Interdisciplinary: This also refers to activities performed toward a common goal by individuals from a group of different disciplines. However, in this case, individuals not only require the skills of their own

discipline, but also have the added responsibility of the group effort on behalf of the activity or client involved. This effort requires the skills necessary for effective group interaction and the knowledge of how to transfer integrated group activities into a result which is greater than the simple sum of the activities of each individual discipline. The group activity of an interdisciplinary program is synergistic, producing more than each individually and separately could accomplish.

Applying the above definitions, team members involved in interdisciplinary rehabilitation practice hope to accomplish an outcome which is greater than each could functioning separately, requiring skills extending beyond the individual discipline. As each team member shares responsibility for the group's activity, each needs to know the general principles and activities of the others' approaches so (s)he can ascertain if the other members of the interdisciplinary team have adequately performed in their own areas of responsibility.

Unfortunately, current vocational rehabilitation practice is most often multidisciplinary which fails to produce optimal rehabilitation outcomes for clients (Peterson, Carnes, & Frank, 1981). Fordyce (1981) aptly stated that overall the rehabilitation service delivery system is not interdisciplinary, and in many ways not even multidisciplinary. In fact, many of our current rehabilitation interventions are retarding rather than promoting interdisciplinary effectiveness.

The balance of this chapter will describe how functional assessment procedures can facilitate the interdisciplinary rehabilitation process and illustrate the related benefits and problems.

BENEFITS OF FUNCTIONAL ASSESSMENT

Contemporary rehabilitation practice requires the coordinated effort of a number of professional specialists with a diversity of technical language that often makes effective communication between disciplines difficult. It seems logical and appropriate for members of the comprehensive rehabilitation community actively to seek service delivery practices which will transcend these technical language barriers. Functional assessment concepts and instrumentation can play an important role in neutralizing language barriers because the primary focus of most functional assessment instruments and procedures is on tracking observable behavior using a minimum of specialized terminology.

A second benefit from the adoption of functional assessment procedures in interdisciplinary practice occurs when such procedures contribute to a holistic approach to providing multiple services to

clients. Each professional staff member contributes to and, in a true holistic sense, make use of functional data from their colleagues, thus providing much needed continuity of information about a client's functioning on a variety of dimensions. In addition, sharing the data directly with the client at regular intervals provides substantive information on the extent of progress in various phases of the rehabilitation program.

The rehabilitation counselor usually functions as the case manager and primary decision maker at each stage of a client's rehabilitation program. This responsibility must involve more than merely being a purchaser of services on behalf of the client or passively accepting and implementing recommendations from interdisciplinary specialists. Careful analytic review of functional assessment information coupled with interdisciplinary team discussions will enhance the counselor's ability to formulate a well-organized rehabilitation plan and adjust that plan as circumstances change.

As information concerning changes in the client's functional capacities and limitations flows in, it constitutes a comprehensive data base on each client's past and present level of functioning, organized and categorized to be of practical value to each member of the interdisciplinary team. The chronological and current nature of the data provide a comprehensive multidimensional picture of the client's progress, which can be used to monitor the IWRP, determine necessary changes in the rehabilitation strategy, and evaluate the appropriateness of the strategies being used. When functional assessment is approached and conducted in this way, it can become the mechanism for facilitating the group dynamics aspect of interdisciplinary rehabilitation practice.

Properly conceptualized, planned, and implemented, functional assessment positively impacts program effectiveness and efficiency. Through appropriate use of data analyses, the rehabilitation counselor and colleagues from allied specialties work together effectively with full knowledge of the degree to which all components are improving the client's employability. Additionally, rehabilitation administrators and managers have available statewide functional assessment data which, when combined with financial information, would permit more meaningful conclusions about the program's cost effectiveness.

One legitimate means of identifying a rehabilitation counselor's level of professional competence is by assessing the impact the practitioner has on his/her clients' rehabilitation outcomes. Functional assessment data analyses can disclose information about the impact specific evaluation, training, and other service programs have on clients' employment outcomes. In those instances where the data analysis suggests less than acceptable improvements in client employability, rehabilitation administrators and staff development

specialists have valuable information to determine what, if any, inservice training might be provided to improve a practitioner's skills.

A final and perhaps most important benefit from functional assessment lies in its value to rehabilitation counselors in their role as the facilitator of the interdisciplinary team process with responsibility for deciding what the client's functional strengths and limitations are at referral; what initial evaluations are needed and who will provide them; which practitioners will assist in developing the client's rehabilitation plan; what specific services will be provided and when; and what the ongoing impact of these services is on the client's employment potential.

For counselors to function effectively as the facilitator-decision maker of the interdisciplinary team, it is essential that they be perceived by other team members as having the expertise and competence to fulfill the role--and functional assessment can enhance this perception. Use of functional assessment concepts and instruments provides counselors with an extensive data base which increases their knowledge about their client's functional capacities and how each member of the interdisciplinary team contributes to the client's improved employability. This substantial knowledge base strengthens the counselor's ability to function as the decision maker and facilitator with the interdisciplinary rehabilitation team.

INTRODUCING FUNCTIONAL ASSESSMENT

Asking members of the interdisciplinary team to embrace functional assessment concepts and incorporate the instruments into their daily work with clients is likely to generate some resistance. One area of resistance might stem from each speciality's technical language and professional jargon which can be and frequently is used to exclude other team members from full participation in the rehabilitation process. Functional assessment methods emphasize reducing and standardizing technical language across disciplines thus minimizing the use of language as a tool of power. Careful explanations while introducing functional assessment procedures can serve to neutralize and counteract resistance.

When planning to implement functional assessment procedures attention must be given to the existing hierarchies within the various organizations and among the disciplines serving rehabilitation clients. The rehabilitation counselor, operating as case manager and key decision maker in an interdisciplinary model, is the logical person to initiate and coordinate the gathering of functional assessment data and to provide specific functional assessment instruments to the members at specified points during the rehabilitation process.

As some members of the rehabilitation team, e.g., physicians and psychologists, are generally regarded as being in a higher status

occupation than counselors, they might resist using functional assessment or any procedures perceived as encroaching on their work or authority. They probably would prefer to approach the client's problems from their discipline's restricted view rather than a holistic perspective and might be expected to experience considerable difficulty with group dynamics and group decision making. Functional assessment procedures could be viewed as an attempt to neutralize an individual's decision making power. However, functional assessment procedures which are an integral part of interdisciplinary rehabilitation provide the ongoing data base from which group rather than power decisions can and should be made.

A FUNCTIONAL ASSESSMENT INTERDISCIPLINARY MODEL

There are a variety of ways in which functional assessment concepts and procedures can be implemented in interdisciplinary rehabilitation. The following description of a model indicates how such procedures might be used during the rehabilitation process and by whom.

The typical array of vocational rehabilitation services can be subsumed under the following categories: referral/intake, eligibility determination, rehabilitation plan development, physical and mental restoration services, training, placement, employment, and follow-up. As Table 1 shows, the rehabilitation counselor is the only member of the interdisciplinary rehabilitation team involved throughout the rehabilitation process while other professionals' involvement is more limited.

When the client initially applies for vocational rehabilitation services, the counselor conducts an intake functional assessment using whatever written data are available, that collected by interviewing the client, and through the administration of a functional assessment instrument(s). Analysis of the data from this initial baseline assessment should provide the counselor with a reasonably good idea what further diagnostic information is needed from referrals to appropriate specialists for more specific diagnostic and/or evaluation services. Accompanying the referral information request would be the functional assessment instrument and functional data already collected, with the request that each specialist provide ratings of the client's functional skills and deficits on all instrument dimensions based on the parameters of their particular evaluation.

Upon receipt of these functional assessments and written reports from each specialist, the counselor now can proceed with the development of the rehabilitation plan. Consistent with previously defined interdisciplinary rehabilitation practice, the counselor would convene an interdisciplinary team to examine all the functional assessment data and, with appropriate client input, formulate a comprehensive rehabilitation plan.

Table 1
Users of Functional Assessment Data
by Phase of Rehabilitation Process

Members of Rehabilitation Community	Phase of Rehabilitation Process								
	Throughout Process	Refer- ral	Elig. Deter.	Rehab. Plan	Physical, Mental Restor. Services	Train- ing	Place- ment	Employ- ment	Follow-up
Client	X	X	X	X	X	X	X	X	X
VR Counselor	X	X	X	X	X	X	X	X	X
VR Supervisor		X		X			X		
Social Security-DDU		X							
Probation Officers		X		X					
Social Workers (psy- chiatric, clinical, general)		X		X	X	X			
Physicians		X			X		X		
Nurses (public health, school)		X		X					
Teachers (general, special education)		X		X	X	X			
Psychologists		X		X	X	X	X	X	
Psychiatrists		X		X	X	X	X	X	
ADI Specialists		X		X	X	X	X		
Occupational Therapy		X		X	X	X	X		
Physical Therapy		X		X	X	X			
Work Adjustment Specialists		X		X					
Employers		X				X	X	X	X
Personnel Management		X				X	X	X	X
Program Evaluation Specialists								X	X
Rehabilitation Research Specialist				X	X	X		X	
Vocational Evaluation Specialists		X		X					

This table depicts the typical array of professionals who make up the Rehabilitation Community and the various stages of the rehabilitation process during which each might be involved in the functional assessment process.

The next stage in a typical client program would entail provision of physical restoration, mental restoration, and/or training services. Depending upon the client's disability, functional capacities, limitations, and rehabilitation goals an extensive range of professional specialists might be involved in carrying out the treatment and/or training programs outlined in the client's plan. During this phase of the rehabilitation process every member of the interdisciplinary team would at specified regular intervals rate the client's functional capacities and limitations using the same functional assessment instruments employed at the referral and eligibility determination stages.

With functional data gathered on a regular basis, the interdisciplinary team has available a rich source of quantitative information about the client's progress in each aspect of the rehabilitation program which would be used to determine alterations or future directions of the treatment/training interventions. Consistent with Melvin's (1980) description of the interdisciplinary rehabilitation process, these staffings would entail a group-centered effort wherein each member would focus attention not only on the results of his/her individual evaluation, but on the entire scope of activities of all members of the team.

At the conclusion of the client's rehabilitation program, the functional assessment data base would provide a comprehensive picture of the client's functioning for use by the rehabilitation counselor and other staff in the placement process.

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Chapter V

FUTURE TRENDS AND ISSUES

"Future trends" may be a logical and even necessary conclusion for this book, but it is an intrinsically risky subject. Forecasting anything can be a chancy endeavor. At best, predictions of the future should be based on data, published research findings, and a well researched analysis of trends. Unfortunately, rehabilitation research efforts are often scattered or lacking.

Further complicating the situation is VR's apparent bias against long range planning and the absence of a cohesive vision of rehabilitation. Administrators who have to forecast and are accountable for their predictions deserve sympathy. Counselors themselves have little opportunity to ponder the future of rehabilitation. As a result, predictions of future trends may boil down to statements of hopes, wishes, and possibilities.

Functional assessment is presented in this book as a comprehensive, pliable tool for the counselor; a measurable, efficient process for the administrator; and a means of documenting accomplishments for legislators' use as they consider laws and continued funding for rehabilitation services. Most importantly, functional assessment is concerned with identifying individual and environmental characteristics that affect a handicapped person's ability to make a meaningful contribution to society.

This chapter will focus on some trends and issues on which, we cautiously predict, functional assessment will have the greatest impact.

ROLE OF THE COUNSELOR

The role of a counselor is in a state of change. Remember the good old days? The agency was small; one person covered many counties; records were relatively brief; and responsibility was clearly defined. Counselors focused on determining what services (mostly medical) and what devices (most often prostheses) were needed. Counselor accountability was through invoices and final case outcome--an individual working successfully. The program did so well it expanded and kept expanding. Along with expansion came major changes in the roles and job functions of the rehabilitation counselor.

A brief review of rehabilitation literature documents some of these changes. Emener (1975), commenting on counselor roles, stated that the rehabilitation counselor must be a

student of life and that the profession is evolving from a specialized application of social casework to the role of a counseling psychologist. Rubin and Emener (1979) noted a decline in guidance and counseling activities, an increase in paperwork, and a remarkable consistency in time spent in placement. They commented on the apparent role strain that counselors were experiencing and suggested reduced caseload sizes or the use of paraprofessionals for paperwork and placement.

Rubin and Porter (1979) summarized findings from a conference which examined the competencies needed by rehabilitation counselors and vocational evaluators. They specified essential competencies in the following categories: analysis/synthesis/interpretation of client information; counseling and interviewing: theory and practice; job development/analysis/placement; and measurement of human potential.

In 1982 Anderson and Parente reported a shift away from counselors coordinating services to a greater emphasis on vocational counseling and placement. This finding is consistent with the increased expectation for accountability and the related monitoring and measurement of counselor activity.

For the most part, accountability has been imposed on counselors. Functional assessment provides counselors an opportunity to take the initiative in defining their role. The Dictionary of Occupational Titles (DOT) defines the counselor's role as follows:

045.107-042 VOCATIONAL REHABILITATION COUNSELOR (gov ser)
counselor vocational rehabilitation:

Counsels handicapped individuals to provide vocational rehabilitation services. Interviews and evaluates handicapped applicants to determine degree of handicap, eligibility for service and feasibility of vocational rehabilitation. Accepts or recommends acceptance of suitable candidates. Determines suitable job or business consistent with applicant's desires, aptitude and physical limitations. Plans and arranges for applicant to study or train for job opening. Assists applicant with personal adjustment throughout rehabilitation program. Aids applicant in obtaining medical services during training. Promotes and develops job openings and places qualified applicant in employment. May refer qualified applicant to BUSINESS-ENTERPRISE OFFICER (gov. ser.) for placement in business enterprise.

This job description mentions placement as a major duty once; the remainder of the duties deal with functional

assessment. If this description is accurate, is it not incumbent upon each counselor to refine his or her use of the instruments by means of systematic and precise personal evaluation? Hopefully counselors will seize this opportunity to use and master the functional assessment process, a major step toward increased autonomy and professionalism. Smits and Ledbetter (1979) note that such participation would "enable counselors to counterbalance bureaucratic values and societal needs with those of their profession and their clients."

PROFESSIONALISM

Functional assessment promises to become a reliable and valid basis for evaluation, decision making, and prediction in rehabilitation. Professional credibility can be expected to increase in direct proportion to the extent that reliability and validity are established for the various assessment instruments, and accuracy of predictions and decisions are confirmed through further research.

Traditionally, the diagnostic process has focused on what is wrong with the client--on labeling and categorizing the deficits. The focus on limitations and deficits tends to place the client in an inferior and passive relationship. More importantly, client capacities and skills may not be fully exploited in planning because of an unsystematic and inadequate assessment. Functional assessment helps to insure that the diagnostic process is comprehensive, systematic, and fully considers the skills and capacities of the client. If the promise of functional assessment can be realized through carefully planned installation and continued research, rehabilitation diagnosis will become a source of increased professional recognition and acceptance.

Functional assessment is an area of expertise unique to rehabilitation counseling. As counselors increasingly move into nontraditional roles in industry and in the private sector, clearly defined skills will be as important as flexibility in gaining acceptance. Lewis, Ramseur, and Sink (1982) note that private rehabilitation counselors are venturing into new areas of work such as expert testimony for Social Security, industrial consulting, divorce, and personal litigation. As they are called upon to give professional testimony, they are recognized as the experts. It is incumbent upon counselors in the public sector to maintain parity in skills.

Matkin (1980) states that a person who presents testimony as a vocational expert should be well prepared, accurate, and objective while making specific references to deficiencies in individual motivation, physical tolerance and employment potential. He listed the university courses needed to enable counselors to meet these new and varied demands. At the top of

the list, rated as most important, was the ability to assess functional limitations resulting from disability, employability, and transferable skills.

Collins (1980) indicated a marked trend toward utilization of private rehabilitation in the next decade because of the timeliness and quality of their services. She stated that an additional factor in leadership will be the ability to predict rehabilitation outcomes with accuracy.

These authors are citing critical, often new, demands on today's rehabilitation counselors in both the public and private sectors. Functional assessment methodology promises to be a central ingredient in meeting these demands, thereby enhancing the professional status of vocational rehabilitation.

RESEARCH

Research will be an ongoing major concern for the future of functional assessment and of the field of rehabilitation counseling. Previous chapters have described the potential of the functional assessment process for sharpening diagnosis and communication, for broadening the scope of planning, for improving vocational choice, and for monitoring client change and outcomes. But a great deal of work needs to be done before that potential can be fully recognized, and that work will inevitably involve counselors, supervisors, and administrators as well as researchers.

The final section of this publication presents eleven functional assessment instruments that are the fruit of research conducted during the past several years. Most of these instruments have not undergone sufficient field testing to be used as the sole basis for clinical decisions. Many do not even have sound reliability data much less data relating to concurrent or predictive validity. One reason for this lack is that instruments are being adopted by agencies to meet recognized needs for more and better client services. The very intensity of these needs makes it difficult to take the time to design and carry out research. Furthermore, if a technique seems promising, selectively withholding it for the sake of controlled experiments runs counter to our service inclinations.

Another problem is that some of the needed research requires years to complete. If you are interested in the relationship between functional limitations and rehabilitation outcomes, for example, it probably would be three or four years before the substantial majority of cases in a study would be closed. With a large enough sample, sufficient cases may close within a year to permit some kinds of statistical analyses, but those individuals may be very different from the ones who are in the system for years before closure. Thus, premature analysis could produce misleading findings.

Not only is research needed on the characteristics of functional assessment instruments but also on the way these instruments or other functional assessment procedures impact on the rehabilitation process. Do they change the proportions of successful closures? Are the successful closures qualitatively better in some way? For example, do the workers obtain jobs that better match their interests and aptitudes or that have higher pay? Does functional assessment impact the efficiency of the rehabilitation process so that, for example, the time between application and acceptance for service is reduced or that time to closure is shortened? Does functional assessment affect service costs? Does it alter client satisfaction with the rehabilitation process or outcome? Do various functional assessment procedures or instruments affect these outcomes differentially? These and other questions need to be examined by means of sound, longitudinal research.

The rehabilitation agencies that choose to implement functional assessment clearly need to be active participants in the rehabilitation process. In many cases the researchers who developed the instruments can play a significant role in designing and conducting the studies. However, the work cannot be done without appropriate funding, a substantial part of which must come from the National Institute of Handicapped Research. The studies will not be quick or inexpensive, but this investment must be made if functional assessment is to fulfill its promise as a significant new dimension of the rehabilitation process.

REHABILITATION OUTCOMES

Another policy issue concerns the use of the 26 closure as the sole measure of rehabilitation success. The use of this one indicator was probably appropriate at one time but expansion and changes in the VR program have made it an inadequate measure. Substantial VR services, especially with severely disabled persons, are directed toward reducing problems in everyday living, paving the way for an eventual vocational goal. But sometimes the vocational goal does not materialize, and the agency receives no recognition for its efforts. At other times, remediation of functional problems (e.g., with severe communication disorders or independent living arrangements) may actually represent a more substantial contribution to a person's well being than vocational services.

Functional assessment can provide a means of reliably specifying an individual's capacities in a variety of essential areas of life functioning, thus providing a way to measure any changes that occur with the provision of rehabilitation services. In fact, it is this comprehensive approach that differentiates VR from other job programs. Training and

placement are only the tip of the service iceberg for most severely disabled clients, and the future may bring recognition of that fact.

EMPLOYMENT

Functional assessment offers the possibility of enhanced relationships with employers. More complete client evaluations should lead to more job-ready clients. If services have been directed toward alleviating problems resulting from the disability as well as any behavioral, social or other limitations, the chances of successful employment are increased.

Most employers are willing to consider applicants who have disabling conditions. Their primary requirements are for persons who can do the job and can function in the work environment. In the absence of a holistic assessment, it is easy to focus on skills training and overlook other functional limitations that may be critical for adjusting to a work environment.

Another potential use of functional assessment is the provision of language and terminology that will be familiar and comprehensible to the employer. This alone could be a significant factor in placement of our clients in industry.

MARKETING

The concept of marketing offers an exciting approach to the placement of rehabilitation clients. The marketing concept of knowing your target audiences, requires a thorough evaluation of employer needs and concerns paired with an effort to meet those needs through a careful evaluation of both client and program capacities. Functional assessment provides a tool for that comprehensive client evaluation required to meet employer specifications.

Parallel to marketing to employers is marketing vocational rehabilitation to legislators and the general public. Functional assessment provides data on client characteristics, gains, and outcomes, and that data can be used to actively market the benefits and results of the rehabilitation program.

TRAINING

Throughout this publication, it has been emphasized repeatedly that implementation of functional assessment will entail major changes in how counselors perform their job and that these changes will necessitate increasing emphasis on training, retraining, and counselor preparation. It is reiterated here in recognition of its importance.

TECHNOLOGY

With increased usage of computers, and especially microcomputers, in field offices of rehabilitation agencies, the functional assessment process can be greatly enhanced. The computer is an ideal tool to assist the counselor and client in the organization, analysis, and integration of functional assessment data. In fact, the future of both the computer and functional assessment in rehabilitation agencies may be inseparable.

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Chapter VI

FUNCTIONAL ASSESSMENT INSTRUMENTS

In this chapter, eleven instruments displaying a remarkable variety of approaches to functional assessment will be described. This review, however, does not claim to be exhaustive or to represent anything except a selection of frequently used and well-tested measures that have potential for use by rehabilitation counselors. In fact, a major category of assessment instruments has been excluded from this review, that is those that are designed for use with only a single impairment group such as mentally retarded or visually impaired clients. (A list of references is included for those interested in exploring instruments designed for specific impairment groups.)

When you compare the eleven instruments to determine how they differ one from another, the number of differences seems to be at least as great as the number of instruments. For example, they differ in breadth of content, potential uses (e.g., case management, eligibility determination, program evaluation), and information gathering methods. To clarify these differences, three approaches have been taken:

1. The eleven instruments are compared with each other in a series of tables that cover several factors important to potential users, such as costs, type of information produced, uses for the information.
2. Each instrument is described in narrative form, including a fuller description of the dimensions found in the tables, the results of validity and reliability testing, references to current research and demonstrations, and an address to which to write for further information.
3. Immediately following the narrative description of each instrument is a case study detailing the type of information that emerges from the instruments. However, for some instruments that are highly detailed and flexible (e.g., Independent Behavior Checklist, Rehabilitation Indicators, Vocational Behavior Checklist), the example provided only indicates a sampling of the breadth of content available within the instrument.

These descriptions of the functional assessment instruments cannot provide sufficient information to determine

if an instrument is fully suitable to your needs. The intent is to provide sufficient information for you to narrow the choices, obtain broad information upon which to formulate judgments, and identify sources of additional information.

The eleven instruments included in this review are:

- * Functional Assessment Profile (FAP)
- * Functional Assessment System (FAS)
 - Functional Assessment Inventory (FAI)
 - Personal Capacities Questionnaire (PCQ)
 - Rehabilitation Goals Identification Form (RGIF)
- * Independent Living Behavior Checklist (ILBC)
- * Level of Rehabilitation Scale (LORS)
 - I. Original
 - II. Revised
- * Life Functioning Index (LFI)
- * Longitudinal Functional Assessment System (LFAS)
 - Self-Observational and Report Technique (SORT)
 - Mechanical device for measuring distance traversed (Odometer)
 - Electro-mechanical device for measuring rest time (RTM) and sit time (STM)
 - Environmental Negotiability Survey (ENS)
- * Preliminary Diagnostic Questionnaire (PDQ)
- * Rehabilitation Indicators (RIs)
 - Status Indicators (SIs)
 - Activity Pattern Indicators (APIs)
 - Skill Indicators (SKIs)
- * Scale of Employability (SE)

- * Vocational Behavior Checklist (VBC)
- * Vocational Diagnosis and Assessment of Residual Employability (VDARE)

COMPARISON OF FUNCTIONAL ASSESSMENT INSTRUMENTS

The information in the following tables came from a questionnaire which each of the functional assessment instrument developers completed describing important dimensions of their instruments:

<u>Table</u>	<u>Title</u>
1	<u>Breadth of Content</u> (Areas of Functioning Covered and Number of Items)
2	<u>Measurement and Output</u> (Mode of Assessment and Format of Results)
3	<u>Information Source</u> (Typical and Possible Sources of Data)
4	<u>Time and Cost</u> (Costs in Terms of Time and Money)
5	<u>Potential Uses</u> (How the Data Can be Used)
6	<u>Potential Users</u> (Settings and Personnel Who are Likely Users)
7	<u>Training</u> (Training Requirements, Options and Costs)
8	<u>Prior Utilization</u> (Appropriate Types of Clients and Number of Settings/Clients Utilizing Instruments)

(Areas of Functioning Covered and Number of Items)

INSTRUMENT

FUNCTIONAL ASSESSMENT SYSTEM (FAS)	FUNCTIONAL ASSESSMENT PROFILE (FAP)	Assessment focuses on 10 areas: problem solving; interpersonal relationships; communication; self-care; object manipulation; mobility; time management; energy reserves; self-direction; and work.
	FUNCTIONAL ASSESSMENT INVENTORY (FAI)	40 items cover 30 limitations of functioning and 10 assets; 2 validity checks include counselor assessment of severity of disability and prediction of employability. 7 areas investigated are viewed as relevant to work capacity: sensory; motor; psychological; intellectual; social; biographical; and environmental.
	PERSONAL CAPACITIES QUESTIONNAIRE (PCQ)	Item-for-item translation of FAI, designed for completion by clients rather than counselors.
	REHABILITATION GOAL IDENTIFICATION FORM (RGIF)	Goal attainment scale designed to record individual rehabilitation goals for treatment planning and to measure their attainment at follow-up. Organized in 18 standardized independent living and vocational goal headings: living arrangements; housekeeping; eating; dressing; personal hygiene; mobility; transportation; health; sexuality; communication skills; social relationships; satisfaction with life; financial management; time management; job seeking skills; vocational skills; work; and miscellaneous.
LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)	INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)	Lists 343 independent living skill objectives in 6 categories: mobility; self-care; home maintenance and safety; food; social and communication and functional academic skills.
	I LEVEL OF REHABILITATION SCALE (LORS) II	Contains 47 items in 5 subscales: ADL; cognition; home activities; outside activities; and social relationships. Contains 11 items in 3 categories of functioning: ADL; mobility; and communication (verbal, gestural and written). Residential and vocational status are also included in follow-up ratings.
	LIFE FUNCTIONING INDEX (LFI)	Contains 10 items in 6 major areas: vocation; education; self-care; residence; mobility; and communication.
	SELF-OBSERVATIONAL AND REPORT TECHNIQUE (SORT)	Records and quantifies a client's reported sequence of activities into units of behavior, describing what the person did, when, with whom, where, and some information on how the activities were carried out.
	ODOMETER	Measure of mobility when attached to the wheels of a wheelchair.
	(RTM/STM)	Measure of time out of bed (Rest Time Monitor) or time sitting in a wheelchair (Sit Time Monitor) when attached to pressure sensitive pads and placed beneath the mattress of a bed or a wheelchair cushion.
	ENVIRONMENTAL NEGOTIABILITY SURVEY (ENS)	Assesses living environments for the physically disabled.
	PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDQ)	Contains 150 items in 8 subscales: work information; preliminary estimate of learning; psychomotor skills; reading comprehension; work importance; personal independence; locus of control/internality; and emotional functioning.
	STATUS INDICATORS (SIS)	Contains 51 descriptors in 6 areas: vocation; income; education; self-care; transportation; and family role.
	ACTIVITY PATTERN INDICATORS (APIs)	Family of instruments which describes patterns of daily activity: types of activities engaged in; location of activities; use of assistance; level of concurrent social contact, etc.
REHABILITATION INDICATORS (RIs)	SKILL INDICATORS (SKIs)	Contains 711 specific skills which describe "behavior tools" for meeting personal goals in 14 functional areas: self-care; mobility; cognition; communication; social ADL; household business and housework; child care; political and community skills; selecting an educational program; attending school; problem solving, vocabulary and other basic skills; seeking employment; selecting and advancing within a career ladder; and vocational skills. Only those skills relevant to a program and to its clients are assessed.
	SCALE OF EMPLOYABILITY (SE)	Contains 114 items in 3 behaviorally anchored scales (counseling, psychology and workshop) which are designed to measure significant components of work behavior among handicapped individuals.
	VOCATIONAL BEHAVIOR CHECKLIST (VBC)	Lists 344 vocationally relevant skill objectives in 7 categories: prevocational; job seeking; interview; job-related; work performance; on-the-job social skills; and union/financial/security skills.
	VOCATIONAL DIAGNOSIS AND ASSESSMENT OF RESIDUAL EMPLOYABILITY (VDARE)	Predicts vocational functioning potential based on DOT information and client's personal history and current level of functioning in 5 areas: medical; psychological; social; educational; and vocational.

TABLE 2: MEASUREMENT AND OUTPUT

(Mode of Assessment and Format of Results*)

TABLE 2: MEASUREMENT AND OUTPUT			DATA OUTPUT FORMATS								
(Mode of Assessment and Format of Results*)			Numerical Score	Composite Score	Graphed Profile	Item-by-Item Analysis	Computer Feedback	Profile Grid with Narrative	Comparison with Norms	Client Feedback Interview	Optional Scaled Items
FUNCTIONAL ASSESSMENT SYSTEM (FAS)	INSTRUMENT	METHODS OF MEASUREMENT									
	FUNCTIONAL ASSESSMENT PROFILE (FAP)	Open-ended behavioral description based on observation, self-report, case file and referral source information, and including "degree of limitation" and "degree of compensation"						X			
	FUNCTIONAL ASSESSMENT INVENTORY (FAI)	Behaviorally anchored four-point scales (0-3), representing no impairment, mild, moderate, and severe impairment, respectively; plus a list of strengths	X	X	(X)	X			X	X	X
	PERSONAL CAPACITIES QUESTIONNAIRE (PCQ)	Same as FAI	X	X	(X)	X				X	
	REHABILITATION GOAL IDENTIFICATION FORM (RGIF)	Five-point scale of goal attainment, ranging from "much less than expected level of outcome" to "much more than expected level of outcome"	X			X		X		X	
LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)	INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)	Skill objectives are specified in terms of conditions of performance, specific behavior, and standards of performance; mastery is recorded by a "+" or "-"			X	X					
	I	Behaviorally anchored five-point rating scale (0-4), based on coding manual which describes each numerical value in observable (to the skilled clinician) behavioral terms		X	X	X	X				
	II	Same as LORS-I		X	X	X	X	X	X		
	LIFE FUNCTIONING INDEX (LFI)	Varying scales (from 4 to 9 items) for each functional area, based on self-report, observation and case file information	X			X					
	SELF-OBSERVATIONAL AND REPORT TECHNIQUE (SDRT)	Self-report and observation translates sequence of activities into units of behavior	X		X	X	(X)				
	ODOMETER	Mechanically recorded direct measure of linear distance traversed during a period of time	X		X	X	(X)				
	REST TIME/SIT TIME MEASURE (RTM/STM)	Mechanically recorded direct measure of elapsed time out of bed or sitting in a wheelchair during a period of time	X		X	X	(X)				
	ENVIRONMENTAL NEGOTIABILITY SURVEY (ENS)	Self-report and observation in assessing (and modifying) living environments	X		X	X	(X)			X	

* X = Typical

(X) = Optional or in process of development

Continued ...

Table 2 (continued)

		DATA OUTPUT FORMATS							
INSTRUMENT	METHODS OF MEASUREMENT								
		Numerical Score	Composite Score	Graphed Profile	Item-by-Item Analysis	Computer Feedback	Profile Grid with Narrative	Comparison with Norms	Client Feedback Interview
PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDQ)	Cognitive scales are performance-based in a right-or-wrong format; Personal Independence is rated on a four-point scale (cannot do, requires assistance from another person, uses device, does by self), based on self-report and demonstration; Locus of Control is rated on a four-point scale (strongly agree, agree, disagree, strongly disagree) based on self-report; and Emotional Functioning is rated on a four-point scale (never, sometimes, often, always) based on self-report.	X		X	X	(X)		X	
REHABILITATION INDICATORS (RIs)	STATUS INDICATORS (SIs)					X		(X)	X
	ACTIVITY PATTERN INDICATORS (APIs)			X	X	X		(X)	X
	SKILL INDICATORS (SKIs)		X	X	X	(X)		(X)	X
SCALE OF EMPLOYABILITY (SE)	Behaviorally anchored four-point scale in which "1" means client is clearly adequate, "2" means borderline or better, "3" means borderline or worse, "4" means clearly inadequate	X	X		X				
VOCATIONAL BEHAVIOR CHECKLIST (VBC)	Skill objectives are specified in terms of conditions of performance, specific behavior, and standards of performance; mastery is recorded by a "+" or "-"			X	X				
VOCATIONAL DIAGNOSIS & ASSESSMENT OF RESIDUAL EMPLOYABILITY (VDARE)	Self-reported and demonstrated occupational/vocational/medical/psychological information is organized and synthesized to predict vocational potential			X		X			

TABLE 3: INFORMATION SOURCE

(Typical and Possible Sources of Data*)

INSTRUMENT		Client Verbal Self-Report	Client Written Self-Report	Observation by Professionals	Observation by Paraprofessionals	Interview with Family/ Significant Others	Interview of Professionals	Interview of Paraprofessionals	Professional Testing	Available Records
FUNCTIONAL ASSESSMENT SYSTEM (FAS)	FUNCTIONAL ASSESSMENT PROFILE (FAP)	X	(X)	X	(X)	(X)	(X)	X	X	
	FUNCTIONAL ASSESSMENT INVENTORY (FAI)	X	(X)	X	X	X	(X)	(X)	X	X
	PERSONAL CAPACITIES QUESTIONNAIRE (PCQ)	X	X							
	REHABILITATION GOALS IDENTIFICATION FORM (RGIF)	X	X			X	(X)	(X)	(X)	(X)
	INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)			X	X					
LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)	LEVEL OF REHABILITATION SCALE (LORS)	I (X)	(X)	X	X	X	X	X		
	II	(X)	(X)	X	X	X	X	X		
	LIFE FUNCTIONING INDEX (LFI)	X	(X)			(X)	X	X		X
	SELF-OBSERVATIONAL & REPORT TECHNIQUE (SORT)	X				(X)				
	ODOMETER (RTM/STM)	(X) (X)		X X	X X	(X) (X)				
REHABILITATION INDICATORS (RIs)	ENVIRONMENTAL NEGOTIABILITY SURVEY (ENS)	X		X	X	(X)				
	PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDQ)	X	X	X	(X)	(X)	X		(X)	X
	STATUS INDICATORS (SIs)	X	X			(X)				(X)
	ACTIVITY PATTERN INDICATORS (APIs)	X	X	X	(X)	X	(X)	(X)		
	SKILL INDICATORS (SKIs)	X	X	X	X	X	(X)	(X)	X	(X)
	SCALE OF EMPLOYABILITY (SE)			X			(X)		X	
	VOCATIONAL BEHAVIOR CHECKLIST (VBC)			X	X					
REHABILITATION INDICATORS (RIs)	VOCATIONAL DIAG/ASSESS OF RESIDUAL EMPLOY. (VDARE)	X	X	X	X	X	X	X	X	X

* X = Typical information source
(X) = Possible information source

TABLE 4: TIME AND COST

(Costs in Terms of Time and Money)

INSTRUMENT		TIME TO ADMINISTER	COST OF MATERIALS FOR 100-CLIENT SAMPLE
FUNCTIONAL ASSESSMENT PROFILE (FAP)		Time varies from 10 minutes to 3 hours depending on number of areas assessed; complete initial assessment using all 10 functional areas = 3 hours	\$100 = 10 user guides and 100 FAP grid forms
FUNCTIONAL ASSESSMENT SYSTEM (FAS)	FUNCTIONAL ASSESSMENT INVENTORY (FAI)	5 to 10 minutes, assuming counselor has previously reviewed client's data	\$21.50 = 10 booklets and 100 answer sheets
	PERSONAL CAPACITIES QUESTIONNAIRE (PCQ)	10 to 20 minutes, depending on client's acuity and comprehension	\$21.50 = 10 booklets and 100 answer sheets
	REHABILITATION GOAL IDENTIFICATION FORM (RGIF)	10 to 60 minutes, depending on number of goal areas	\$66.00 = 10 booklets and 100 answer sheets
INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)		Time varies depending on which and how many objectives are relevant to client	\$20
LEVEL OF REHABILITATION SCALE (LORS)	I	10-20 minutes	\$15 = 3 pp. X \$.05/pg. X 100
	II	10-15 minutes	\$750 = report service w/ norm data and consultation
LIFE FUNCTIONING INDEX (LF1)		5-10 minutes	(To be determined)
LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)	SELF-OBSERVATIONAL AND REPORT TECHNIQUE (SORT)	Interview - 20-30 minutes; less than 2 person hours per patient interview to collect, process & interpret data	\$250 (maximum for entire LFAS system)
	ODOMETER	Read monitor periodically (daily, weekly)	
REHABILITATION INDICATORS (RIS)	RTM/STM	Read monitor periodically (daily, weekly)	\$20-30, depending on format
	ENVIRONMENTAL NEGOTIABILITY SURVEY (ENS)	Home visit observation & interview - 1-2 hrs.	
PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDQ)		1 hour for interview; ½ hour for interpretation; ½-1 hour for feedback	\$50 (client booklet retails at \$.50)
REHABILITATION INDICATORS (RIS)	STATUS INDICATORS (SIs)	5-15 minutes, depending on format	\$20-30, depending on format
	ACTIVITY PATTERN INDICATORS (APIs)	Time varies from 10-60 minutes, depending on format and level of detail sought	\$25-40, depending on format
	SKILL INDICATORS (SKIs)	Time varies from 10 minutes to several hours, depending on number of skills assessed and data gathering approach used	(Cost of training materials only)
SCALE OF EMPLOYABILITY (SE)		10-20 minutes for each scale	\$4.50 per document, but can be machine copied
VOCATIONAL BEHAVIOR CHECKLIST (VBC)		Time varies, depending on which and how many objectives are relevant to client	\$20
VOCATIONAL DIAGNOSIS & ASSESSMENT OF RESIDUAL EMPLOYABILITY (VDARE)		30 minutes to one hour	\$20

TABLE 5: POTENTIAL USES

(How The Data Can Be Used*)

INSTRUMENT	CLINICAL/CASE MANAGEMENT												PROGRAM MANAGEMENT	
	Problem Identification	Diagnosis	Eligibility/Feasibility	Organizing Information	Individual Goal Setting	Individual Service Planning	Facility Feedback	Interdisciplinary Team Communication	Progress Tracking and Reporting	Outcome Measurement and Goal Attainment	Program Evaluation	Facility Accreditation	Descriptive Research	MEASURE OF PATIENT/CLIENT CHANGE?
FUNCTIONAL ASSESSMENT SYSTEM (FAS)	FUNCTIONAL ASSESSMENT PROFILE (FAP)	X	X	X	X	X		X	X	X				YES
	FUNCTIONAL ASSESSMENT INVENTORY (FAI)	X	X	X	X	X		X				(X)		NO
	PERSONAL CAPACITIES QUESTIONNAIRE (PCQ)	X	X	X	X	X						(X)		NO
	REHABILITATION GOALS IDENTIFICATION FORM (RGIF)			X	X	X	X	X	X	X		X		YES
LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)	INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)	X	X	X	X	X	X	X	X	X	X			YES
	I LEVEL OF REHABILITATION SCALE (LORS)			X			X	X	X	X	X	X	X	YES
	II			X			X	X	X	X	X	X	X	YES
	LIFE FUNCTIONING INDEX (LFI)	X		X					X	X				YES
	SELF-OBSERV. & REPORT TECHNIQUE (SORT)	X	X		X	X	(X)	X	X	X	(X)		X	YES
	ODOMETER	X			X	X	(X)	X	X	X	(X)		X	YES
	(RTM/STM)	X			X	X	(X)	X	X	X	(X)		X	YES
REHABILITATION INDICATORS (RIs)	ENVIRONMENTAL NEGOTIABILITY SURVEY (ENS)	X		X	X	X	(X)	X	X	X	(X)		X	YES
	PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDQ)	X	X	X	X	X				(X)	(X)		(X)	(YES)
	STATUS INDICATORS (SIs)	X		X	X	X		X	X	X	X		X	YES
	ACTIVITY PATTERN INDICATORS (APIs)	X			X	X	(X)	X	X	X	X		X	YES
	SKILL INDICATORS (SKIs)	X		X	X	X	(X)	X	X	X	X	(X)	X	YES
	SCALE OF EMPLOYABILITY (SE)	X	X	X	X	X	X	X	X	X	X		X	YES
	VOCATIONAL BEHAVIOR CHECKLIST (VBC)	X	X	X	X	X	X	X	X	X	X			YES
REHABILITATION INDICATORS (RIs)	VOCATIONAL DIAGNOSIS & ASSESSMENT OF RESIDUAL EMPLOYABILITY (VDARE)			X	X	X		X	X	X			X	YES

* X = Designed for and use demonstrated
(X) = Designed for but use not demonstrated

TABLE 6: POTENTIAL USERS

(Settings and Personnel Who Are Likely Users*)

INSTRUMENT	VOCATIONAL REHABILITATION					MEDICAL			FACILITIES			INDEPENDENT LIVING			S
	VR Counselors	VR Supervisors	VR Program Evaluation	VR Administration	Medical Team	Medical Program Evaluation	Medical Administration	Rehabilitation Facilities Service Providers	Rehabilitation Facilities Program Evaluation	Rehabilitation Facilities Administration	Independent Living Service Providers	Independent Living Program Evaluation	Independent Living Administration	Researchers	
FUNCTIONAL ASSESSMENT SYSTEM (FAS)	FUNCTIONAL ASSESSMENT PROFILE (FAP)	X	X		(X)			(X)			(X)				
	FUNCTIONAL ASSESSMENT INVENTORY (FAI)	X	X	X	X	X		X							
	PERSONAL CAPACITIES QUESTIONNAIRE (PCQ)	X	X	X	X	X		X							
	REHABILITATION GOALS IDENTIFICATION FORM (RGII)	X	X	X	X	(X)		X	X		(X)	(X)		(X)	
	INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)							X	X	X	X	X	X		
FUNCTIONAL FUNCTIONAL ASSESSMENT SYSTEM (FFAS)	LEVEL OF REHABILITATION NEEDS I				X	X	X	X	X	X	(X)	(X)	(X)	X	
	II				X	X	X	X	X	X	(X)	(X)	(X)	(X)	
	LIFE FUNCTIONING INDEX (LFI)	X		X	X										
	SELF-OBSERV. & REPORT TECHNIQUE (SORT)	(X)	(X)	(X)	(X)	X	(X)	(X)	X	(X)	(X)	(X)	(X)	(X)	X
	100METER	(X)	(X)	(X)	(X)	X	(X)	(X)	X	(X)	(X)	(X)	(X)	(X)	X
	RTM/STM	(X)	(X)	(X)	(X)	X	(X)	(X)	X	(X)	(X)	(X)	(X)	(X)	X
	ENVIRONMENTAL NEGOTIABILITY SURVEY (ENS)	(X)	(X)	(X)	(X)	X	(X)	(X)	X	(X)	(X)	(X)	(X)	(X)	X
	PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDQ)	X	X	(X)	(X)	(X)	(X)	(X)	X	(X)	(X)	(X)	(X)	(X)	X
	STATUS INDICATORS (SIs)	X	X	(X)	(X)	(X)	X	(X)	(X)	(X)	X	X	X	X	X
	ACTIVITY PATTERN INDICATORS (APIs)	X	(X)	(X)	(X)	X	X	(X)	(X)	(X)	X	X	X	X	X
REHABILITATION INDICATORS (RIs)	SKILL INDICATORS (SIs)	X	X	(X)	(X)	X	X	(X)	(X)	X	X	X	X	X	X
	SCALE OF EMPLOYABILITY (SE)	X			X			X							X
	VOCATIONAL BEHAVIOR CHECKLIST (VBC)							X	X	X	X	X	X		
	VOCATIONAL DIAGNOSIS & ASSESSMENT OF RESIDUAL EMPLOYABILITY (VARE)	X	X	(X)		(X)		X	(X)		(X)				X

* X = Used moderately (3-10 settings) or widely (10+ settings)
 (X) = Used minimally (1-2 settings) or could be used

TABLE 7: TRAINING

(Training Requirements, Options and Costs)

	Instrument	Training Required	Types of Training Available				Certification Procedure	Costs
			Self Study	Taped	In-Person	Practice Assessments		
FUNCTIONAL ASSESSMENT SYSTEM (FAS)	FUNCTIONAL ASSESSMENT PROFILE (FAP)	Yes	X		X	X		2 days (1 day orientation/practice; 1 day follow-up); cost is salary of individuals involved
	FUNCTIONAL ASSESSMENT INVENTORY (FAI)	No, but prefer'd	X	X	X	X		(To be determined)
	PERSONAL CAPACITIES QUESTIONNAIRE (PCQ)	No	X					(To be determined)
	REHABILITATION GOALS IDENTIFICATION FORM (RGIF)	No, but prefer'd	X		X	X		(To be determined)
	INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)	No	X					-0-
	LEVEL OF REHABILITATION SCALE (LORS)	I Yes II Yes	X X		X X			(To be determined) \$700 for 4-hour workshop offered by developers on hospital grounds
LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)	LIFE FUNCTIONING INDEX (LFI)	No	X			X		-0-
	SELF-OBSERV. & REPORT TECHNIQUE (SORT)	Yes	X	X	X	X		Varies; in addition, LDMS (Longitudinal Data Management System) available: package of computer programs designed to facilitate management & analysis of LFAS data.
	ODOMETER	Yes	X	X	X	X		
	(RTM/STM)	Yes	X	X	X	X		
	ENVIRONMENTAL NEGOTIABILITY SURVEY (ENS)	Yes	X	X	X	X		
REHABILITATION INDICATORS (RIs)	PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDQ)	Yes	X	X	X	X Video Tapes	X	User Level I & II = \$100 Trainer Level III = \$ 50
	STATUS INDICATORS (SIs)	Yes	X		X	X		Varies, depending on format adopted. Manuals vary from \$10-50; optional computer programs for data analysis are \$75-150. In-person training by arrangement.
	ACTIVITY PATTERN INDICATORS (APIs)	Yes	X		X	X		
	SKILL INDICATORS (SKIs)	Yes	X		X	X		
	SCALE OF EMPLOYABILITY (SE)	No	X					-0-
	VOCATIONAL BEHAVIOR CHECKLIST (VBC)	No	X		X			-0-
	VOCATIONAL DIAGNOSIS & ASSESSMENT OF RESIDUAL EMPLOYABILITY (VOARE)	No, but helpful	X					2 days (\$150/person)

TABLE 8: PRIOR UTILIZATION

(Appropriate Types of Clients and Number of Settings/Clients Utilizing Instruments)

		TYPES OF PATIENTS/CLIENTS		TOTAL NUMBER SETTINGS	TOTAL NUMBER CLIENTS
INSTRUMENT		INSTRUMENT APPROPRIATE	INSTRUMENT INAPPROPRIATE		
FUNCTIONAL ASSESSMENT SYSTEM (FAS)	FUNCTIONAL ASSESSMENT PROFILE (FAP)	Any rehab client, esp. with assets & limits difficult to assess	None	5	250
	FUNCTIONAL ASSESSMENT INVENTORY (FAI)	All disability types with emphasis on the severe physical dis- ability	Clients w/ limited problems indicating little need for assessment	20(est)	3,000+
	PERSONAL CAPACITIES QUESTIONNAIRE (PCQ)				(TBD)
	REHABILITATION GOALS IDENTIFICATION FORM (RGIF)	All rehab clients	None		(TBD)
	INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)	All independent living clients	Vocational rehab- ilitation clients	50(est)	6,000+
	LEVEL OF REHABILITATION SCALE (LORS)	I Medical rehabilita- tion in-patients II	Clients in shelter- ed workshop, moder- ately impaired, or vocational rehab	20(est) 25(est)	2,500+ 3,000+
LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)	LIFE FUNCTIONING INDEX (LFI)	All rehab clients	None	2	1,318
	SELF-OBSERVATIONAL & REPORT TECHNIQUE (SORT)	Any with average in- telligence & verbal skills	Clients with less than average intel- ligence &/or im- paired communica- tion functions	6	475
	ODOMETER	Mechanical devices for wheelchair &/or bedridden clients		6	475
	(RTM/STM)			6	475
	ENVIRONMENTAL NEGOTIABILITY SURVEY (ENS)			6	475
REHABILITATION INDICATORS (RIS)	PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDQ)	Those in need of functional assess- ment	Those w/ extremely limited communica- tion	17 states	1,500+
	STATUS INDICATORS (SIS)	All rehab patients/ clients	None	20	2,300+
	ACTIVITY PATTERN INDICATORS (APIS)	All rehab patients/ clients	None	25	4,200+
	SKILL INDICATORS (SKIS)	All rehab patients/ clients	Those for whom skills are not at issue	7	200+
	SCALE OF EMPLOYABILITY (SE)	Vocationally handi- capped (physical, men- tal, emotional, social)	Those with no vo- cational potential	Not Available	1,000's (6 years)
	VOCATIONAL BEHAVIOR CHECKLIST (VBC)	VR clients	Those with no vo- cational potential	100(est)	8,000+
	VOCATIONAL DIAGNOSIS & ASSESSMENT OF RESIDUAL EMPLOYABILITY (VDARE)	Vocational clients (VR, WorkComp, injured)	None	150(est)	250,000

SUMMARIES OF INDIVIDUAL INSTRUMENTS

A monograph, entitled Client Assessment Measures in Rehabilitation, was published in October, 1981, for the National Institute of Handicapped Research as part of the University of Michigan Rehabilitation Research Institute's (UM-RRI) mission to enhance the program evaluation capacity of state vocational rehabilitation agencies. Forty client assessment instruments were selected for inclusion in the monograph, eleven of which were determined appropriate for inclusion in this publication. A copy of the monograph description was sent to each developer for updating as of April, 1983. The updated descriptions of the eleven instruments contain the following elements:

- * Developer(s) including a date associated with the measure's development
- * Purpose
- * Description including the areas assessed and the type of items used
- * Use including proposed uses, target populations, settings for use
- * Administration
- * Scoring
- * Reliability including, when available, a
- * Validity description of the type of reliability or validity examined and the population on which the data were gathered. Statements regarding the reliability and validity of instruments are based on information obtained from the developers and/or literature; they are not the judgments of the UM-RRI or the IRI Prime Study Group
- * Advantages coming primarily from the
- * Limitations developers and the literature
- * References
- * Availability from whom and where to secure more information

A complete copy of the UM-RRI monograph can be obtained by requesting: Client Assessment Measures in Rehabilitation,

Michigan Studies in Rehabilitation, Utilization Series: 5,
from:

Don K. Harrison, Ph.D.
The University of Michigan
Rehabilitation Counselor Education
School of Education
East & South University Avenues
Ann Arbor, Michigan, 48109

Case summaries were provided by the instrument developers in response to a request for a brief summary of a typical case which would show the kind and amount of information secured through administration of their instruments.

The eleven instrument descriptions and case summaries appear in the following order:

Functional Assessment Profile (FAP)
Functional Assessment System (FAS)
Independent Living Behavior Checklist (ILBC)
Level of Rehabilitation Scale (LORS-I and II)
Life Functioning Index (LFI)
Longitudinal Functional Assessment System (LFAS)
Preliminary Diagnostic Questionnaire (PDQ)
Rehabilitation Indicators (RIs)
Scale of Employability (SE)
Vocational Behavior Checklist (VBC)
Vocational Diagnosis and Assessment of Residual
Employability (VDARE)

FUNCTIONAL ASSESSMENT PROFILE (FAP)

DEVELOPER(s)

The FAP was developed by an intra-agency task force within the Massachusetts Rehabilitation Commission in 1976.

PURPOSE

The FAP is a guide to the identification of a client's functional assets and liabilities in the rehabilitation process for use in clinical problem solving; it is not intended to be a rating scale.

DESCRIPTION

Ten functional areas related to the performance of work and activities of daily living are assessed through the following means: open-ended behavior description; degree of limitation (i.e., asset, no limitation, minor limitation, or major limitation); compensation (i.e., fully compensated, partially compensated, no compensation now, or no possible compensation); and open-ended comments. The ten functional areas include problem solving, interpersonal relationships, communication, self-care, object manipulation, mobility, time management, energy reserves, self-direction, and work.

USE

This measure is appropriate for all VR clients. However, because of the time involved in completing the FAP, its use may be limited to particularly difficult cases, cases in Status 24, or transfer cases. Also, it is not necessary to administer the entire FAP to all clients; the most relevant of the ten functional areas may be addressed for a given individual.

The FAP is primarily used by counselors in order to facilitate the rehabilitation process: conducting preliminary diagnostic studies, determining eligibility/severity, evaluating the adequacy of the diagnostic study, developing the Individualized Written Rehabilitation Program (IWRP), and providing guidance and counseling. Supervisors would find it useful for case evaluation and team consultation. Vocational evaluators in facilities may also find it useful. It is appropriate as a framework for clinical problem solving and not recommended as a rating tool for program evaluation.

ADMINISTRATION

The FAP is completed by the counselor on the Functional Assessment Profile Grid, although the client and others involved in the client's rehabilitation can play a part as well. A User's Guide is provided that includes instructions, relevant definitions, possible questions to use to obtain necessary information, and several short case studies as examples. The counselor should be trained in behavioral observations and familiar with the definitions and directions in the User's Guide. It is recommended that the counselor review an actual case with a person already trained in the profile's use for greatest ease in utilizing the FAP.

The Massachusetts Rehabilitation Commission conducted a training program for vocational rehabilitation counselors using the FAP. The purpose was to instruct the counselors in the use of the FAP for assessing client functioning and the incorporation of this information into rehabilitation planning with the IWRP. A Trainer's Guide, based on this program, is available for those who are interested in conducting their own training.

Assessments can be made through the rehabilitation process in order to monitor progress toward the client's goal. Administration time can vary from a few minutes to three hours depending on the application of the profile. A quick screening of a case for information requirements or the assessment of one functional area can take about 10-20 minutes. However, sorting out all of the information acquired through a thorough diagnostic study into functional capacities and limitations and planning for the IWRP can take up to three hours.

SCORING

Since the profile is not a rating scale or a test, there is no scoring procedure.

RELIABILITY

There is no evidence of reliability. Plans for such studies were discarded when the developers ascertained that it was best utilized as a framework for clinical problem solving rather than a rating instrument.

VALIDITY

There is no evidence of validity. Plans for such studies were discarded when the developers ascertained that it was best utilized as a framework for clinical problem solving rather than as a rating instrument.

ADVANTAGES

This system of functional assessment is flexible. It allows the counselor to analyze and use the information gathered on a client as it makes sense to him/her. Also, a connection between the assessment of the client and planning for treatment is established through the compensation section.

LIMITATIONS

First, the assessment itself cannot be any better than the clinical skills of the counselor doing the assessment. Second, use of the profile demands comfort in expressing medical concepts in behavioral terms. Third, the profile is useful only as a clinical tool and not for program evaluation or statistical comparison.

REFERENCES

Langton, M.S. Final report: National short-term training project on the functional assessment profile (RSA Training Grant No. 45-P-81552/1-01). Boston: Massachusetts Rehabilitation Commission, October, 1980.

Marsh, S.K., Konar, V., Langton, M.S., and LaRue, A.J. The functional assessment profile: A rehabilitation model. Journal of Applied Rehabilitation Counseling, Fall 1980, 11 (3), 140-144.

AVAILABILITY

The FAP, including the User's Guide and the Trainer's Guide, can be obtained by contacting:

Staff Development Unit
Massachusetts Rehabilitation Commission
20 Providence Street
Boston, MA 02116

CASE SUMMARY
FUNCTIONAL ASSESSMENT PROFILE (FAP)

Joe Low was referred to me on October 17, 1977. A 24y/0 quadriplegic, Joe was referred by his Occupational Therapist, Susan Strength for his potential employability. Joe was injured in 1975 as a result of a heroin overdose that caused a blood clot in his spinal cord, and left him in a coma for eight weeks. In addition, Joe was a heavy alcohol user. His history of drugs also included heroin use for 9 years, and some speed. Up to this point, his longest time without heroin had been 1 year.

The day that I met Joe he was unshaven, without some teeth, and very ambivalent about a life-style without drugs. He appeared depressed and he was in a wheelchair. He characterized himself as unsure where he fit in. He was living with a brother at home. His mother lived upstairs. His father was absent from the home and had been since Joe was a child. Joe says he has two brothers and a sister. One brother (22) is psychotic, one (19) alcoholic and his sister (23) addicted to Angel Dust. Only his older brother was able to work and he had a job as a custodian. Joe received \$109.00 per month from Welfare. His home life is not stable. Joe's area of interest is in walking again. He described his vocational problem as being his disability.

He has a court record for drugs, robbery and kidnapping, but he never actually served time for the offenses. He has been bonded, and been on probation and paid fines. He graduated from high school in 1973 at the age of 21. He took the college course and got average grades but had been kicked out of various schools because he was defiant. He liked drama better than any subject and got A's in that. He disliked Geometry. Drama club was his only extracurricular activity. His work history is 2 1/2 years in duration. His first job after high school was that of a foreman in a cafeteria. He worked there for a year and a half, was paid \$3.00 per hour and left due to a fight with his boss. Following that he got a job in a bank as a messenger. He worked there for a year and earned \$73.00 per week. He left there when he decided not to work and remained unemployed until his accident.

Joe appears bright but cynical. He takes valium, 20 mg. 4 times per day for tension over family problems. His hospitalizations included one at Urban City Rehab. for his accident (6 mos.) and 1 hospitalization the year earlier for substance abuse at a chronic disease hospital. The professionals he has listed are: Ms. Strength his Occupational Therapist, Ms. Helpful his Social Worker, and Ms. Agility his Physical Therapist, all on the staff at Urban City Rehab. He also lists a visiting nurse by the name of Mable Marlow.

Since the initial interview, I have acquired the following background information about Joe.

He started drinking beer when he was 13, but didn't start drinking heavily until his twenties. The drinking would lead to shooting dope. While in high school he did a large amount of stealing and was arrested many times. It was also during this time that he described himself as having been drunk for weeks at a time. He still feels the urge to shoot heroin when he drinks. He says he has two dreams. One is that a new drug will help him to walk again and the other is being an actor.

In January of '78, Joe agreed to go to a detoxification unit for a day trial. In April of '78, I found Joe eligible for services for the following reasons:

Client is a 25 year old male with diagnoses of S/P anoxic encephalopathy secondary to drug abuse in 1976 with residual spastic hemiparesis. Client was hospitalized in 1976 and is again hospitalized at Urban City Rehab. Hospital for PT, OT and ? of reducing spasticity.

Client was a heroin addict for 9 years along with other substance abuse. Client was arrested several times but never served time.

Client is presently wheelchair bound and will probably be wheelchair dependent for the rest of his life. He has some limitation in the right arm and hand and would have difficulty with bimanual dexterity although this is improving.

Client has an IQ of 88 indicating brain damage due to overdose. Client is, however, extremely motivated to further his education. Client needs counseling to realistically assess his situation and improve socialization behaviors. He will need training and possible physical restoration services.

Client is severely disabled as he will need multiple services and has functional limitations.

In summation:

Joe is a 26 year old man with a diagnosis of S/P anoxic encephalopathy secondary to heroin overdose. As a result of the encephalopathy the client is a spastic quadriplegic. On 2/16/78 Joe was administered the WAIS. His scores included verbal I.Q. of 95; a performance I.Q. of 81 for a full scale score of 88. There is some indication of intellectual deterioration and brain damage with respect to visualization.

eye-hand processes, new learning and auditory recall of non-meaningful material. Joe expresses vocational aspiration to be a poet or writer. He is a high school graduate and had been a member of the drama club. Presently, Joe lives in his own apartment in a handicapped housing unit. On vocational testing the client's highest interest scores were Animal Service (66), Writing (64), Perform or Entertaining (62), Medical Service (61), Teaching (60), Social Services (58). The occupational scales on those that relate to areas where people are presently employed were similar to travel agent (51) chiropractor, buyer, merchandiser, librarian, operating room technician, funeral director, newspaper reporter and advertising executive. On general themes Joe's highest score was Artistic (58) and his second highest Social (57). Joe currently goes to physical therapy once a week, volunteers at Urban City Rehabilitation Hospital, talks about going to school, has a PCA and expresses some boredom and loneliness. Although Joe talks about going to school, he has done very little to acquire the necessary information.

URBAN CITY REHABILITATION HOSPITAL REPORT - 2/28/78

History

This 25 year old white male returns to the Urban City Rehabilitation Hospital from General Hospital where he had an operation on his left elbow. Before that he had been at this hospital for several months following his transfer from the Southside City Hospital. His problem began in the summer of 1976 when following an overdose of Heroin he suffered a cardiac arrest and was resuscitated. After his arrest he, according to his own history, remained in a "coma" for a period of time and then was in a "stupor". As he regained consciousness, he noted that his vision was disturbed and he would often see things that "weren't there". He was also weak in all four extremities, and numb throughout his body except for his buttocks. Since he was first seen at this hospital he had been getting steadily better in all spheres. The patient also notes that his mental functioning, including his memory and his calculation have also been improving. He was seen by several neurologists at this hospital who felt that he had suffered some cerebral damage after his arrest, and perhaps some damage to the spinal cord as well.

Neurological Examination today reveals an alert, awake, cooperative young gentleman in no acute distress. Pupils are equal and reactive to light. Visual fields are full to confrontation, and extraocular movements are full without nystagmus. There is no facial weakness and other cranial nerves appear intact.

Motor Exam reveals spastic tone and profound weakness in both legs below the hip. The left leg is much weaker than the right and he can barely move his leg at all. On the other hand, he can move the right foot and raise the right leg off the bed with some facility. The right arm has almost normal strength and he is somewhat slow with finger tapping on the right hand. The left hand and arm are testably weak and seem weaker than the arm on the right. There is also slowed rapid alternating movements with the left hand. Tone in the arm is somewhat increased. Sensory exam today seems normal for pinprick, light touch, position and vibration testing and there is no sensory level. However, he misses 2-3/5 number written on the right palm. Graphesthesia in the left hand and stereognosis in both hands appears intact. Reflexes are 3+ and active in the arms. There is a jaw jerk. Reflexes are very active in the legs and clonus at the knees and ankles and there are bilateral upgoing toes. There was no cerebellar ataxia noted, and the gait was not tested.

Summary

This 25 year old gentleman seemed to have the following deficits following cardiac arrest in the summer of 1976:

Coma progressing to stupor and then wakefulness, visual disturbance, difficulty in calculations and memory and other high cortical functions, and a spastic quadriplegia which has improved considerably. All of these sequelae are perfectly consistent with bilateral cerebral cortical infarcts in the border-zone territory, that are often seen after cardiac arrest. And, like Dr. West, I am puzzled by the weaker legs as compared to the arms, and agree that this either represents the particular distribution of the border-zone in this patient or perhaps a degree of spinal cord injury also happened after cardiac arrest.

In any event, his course has been one of steady improvement and we would expect that this will continue to be the case.

Mental status testing today appears quite normal, and most of his sensory findings have disappeared. His vision appears normal.

His motor strength will follow the same course as that in improving stroke.

He will continue to improve, although at a slower and slower rate, and will probably be never normally strong again.

Thank you for referring this interesting case to us.

FUNCTIONAL AREA	DESCRIPTION	Degree of Limitation			Compensation				COMMENTS OR COMPENSATION TO BE CONSIDERED
		Asset	No Limitation	Minor Limitation	Major Limitation	Compensated Fully	Compensated Partially	No Compensation Now	No Possible Compensation
1. <u>Problem Solving</u>	Client has good memory, distracted by red tape or unpleasant details. Survived 9 years on the street without getting caught. Client's recent record of problem solving too brief to adequately assess. He had components of memory, attention and reasoning. Joe describes his life history in detail. Has no difficulty revealing events or focusing attention on what he is telling you. He is able to identify the problems in his family situation and problems he faces in attempting to live independently. Is having most difficulty with leisure time.			X			X		How does Joe apply his problem solving skills in his new life-style?
2. <u>Interpersonal Relationships</u>	Client's family relationships are poor. Relies on rehabilitation counselor and physical therapist for support. Is well-known and well-liked on his volunteer job. Has difficulty getting close. Has no close interpersonal relationships and says he is lonely. Hasn't formed any personal friends independent of his hospital relationships.				X		X		Has Joe ever considered getting involved in a group to lessen his isolation? What is he doing to expand his circle of friends?
3. <u>Communication</u>	Client has excellent verbal skills: good vocabulary, personable style, good listener, able to draw another person out in conversation.	X							Does Joe realize what an asset his verbal skills are? Would a Basic English course assist with written expression, sentences?
4. <u>Self-Care</u>	He does have a PCA who shops and cleans for him. He arranges for physical therapy himself and keeps his appointments.			X			X		How is Joe utilizing his PCA? Are there any tasks currently done by Joe that might be done by the PCA or vice versa?
5. <u>Object Manipulation</u>	Has full range of motion in right arm. Has difficulty lifting left arm above his shoulder. Has limited strength in left arm, could lift an ashtray, and can lend passive assistance to right arm. On psychological testing 1 year ago, showed deficits in eye-hand coordination. Has been able to do all ADL.				X			X	Are there any tasks that you can manage right now which you would like to learn?

FUNCTIONAL AREA	DESCRIPTION	Degree of Limitation				Compensation				COMMENTS OR COMPENSATION TO BE CONSIDERED
		Asset	No Limitation	Minor Limitation	Major Limitation	Compensated Fully	Compensated Partially	No Compensation Now	No Possible Compensation	
6. <u>Mobility</u>	Can stand with assistance of parallel bars for brief periods and take up to 10 steps, can transfer at home. Client can use the Ride. Can wheel himself several blocks to his volunteer job.			X			X			Why is Joe having trouble with car transfers? Would instruction help? If he could transfer, then he could take cabs. Question driving.
7. <u>Time Management</u>	Currently manages his volunteer job 4 days per week and physical therapy one a week and appointments with counselor. Client has more energy than activities. Has some difficulty using up leisure time. Joe complains of boredom and isolation when he is not working.			X			X			Does Joe know how to manage his leisure time? Has he ever thought about it?
8. <u>Energy Reserves</u>	Has sufficient energy to care for himself and to engage in volunteer work. Energy does not appear to be a problem. He volunteers four days per week and goes to physical therapy on the fifth day.		X							Seems fine - no apparent problems.
9. <u>Self-Direction</u>	Client going through process of defining his values, has set goals for himself but beginning to reassess how realistic they are. Needs some support in outlining steps to reach realistic goals.				X		X			Has Joe identified his values? Does he need assistance identifying appropriate steps to pursue his goals?
10. <u>Work</u>	Prior to his accident client's longest job was 1 1/2 years as a cafeteria worker. Presently he works as a messenger (volunteer). with With sketchy work history it is difficult to detail work habits. Client has no work incentives and no motivation to get a job. He would like to write for a living. Work ethic has never been part of his environment.				X			X		Has Joe attempted to publish any of his poetry? Could he use assistance with vocational information? Does he know the field of work well?

FUNCTIONAL ASSESSMENT SYSTEM (FAS)

Functional Assessment Inventory (FAI)
Personal Capacities Questionnaire (PCQ)
Rehabilitation Goals Identification Form (RGIF)

DEVELOPER(s)

The FAS was developed by Nancy M. Crewe and Gary T. Athelstan at the University of Minnesota's Department of Physical Medicine and Rehabilitation, and copyrighted in 1980.

PURPOSE

The FAI is the first and most fully researched part of this system. It provides an assessment of an individual's capacity for work or other productive activity. It is intended to organize and focus work-related information rather than generate new data about the client. Therefore, it will draw upon and not replace interviewing, psychometric testing, and work evaluation.

The PCQ is an item-by-item translation of the FAI that is designed to be completed by clients themselves rather than by counselors. As such, it can provide information about how the client views his/her situation. This can generate productive dialogue between them in the counseling interview.

The purpose of the PCQ is to aid the counselor and client using functional information to set individualized, measurable rehabilitation goals.

DESCRIPTION

The FAI consists of 40 items (i.e., 30 four-point functional limitation items, and a 10-item checklist of assets or unusual strengths). Areas investigated include the following: sensory, motor, psychological, intellectual, social, biographical, and environmental. The 30 four-point functional limitation items are behaviorally anchored and selected for their vocational relevance. Each item ranges from zero to three, representing no impairment, mild, moderate, and severe impairment, respectively. The presence of any of the 10 strength items (e.g., verbal fluency) is seen as a moderator variable that may mitigate the impact of functional limitations on the employment potential of disabled individuals. The items take into account the environment in which the client must function as well as characteristics of the particular individual.

Two counselor assessment scales (one of severity of disability and one of the counselor's prediction of employability) are included to provide information about concurrent validity (i.e., to what extent did the inventory scores correlate with counselor judgment of severity of disability and likelihood of working). The severity of disability scale is a seven-point rating scale ranging from 1 (minimally disabled) to 7 (very severely disabled). The employability scale (i.e., vocational potential) is a four-point rating scale ranging from 1 (poor chance of client ever working) to 4 (excellent chance of client working).

USE

The FAI seems appropriate for all clients and particularly for severely handicapped clients. It would be useful in state-federal VRS, rehabilitation facilities, and other settings.

The FAI will be beneficial to various professionals in the rehabilitation field. Case managers will be able to use the FAI to identify strengths and limitations of their clients in order to ensure that all relevant problems are considered prior to selection of a vocational choice and that potential disruptive barriers are given special attention in the placement process. Program managers and researchers will be able to use the FAI to provide an objective basis for definition of severe disability and enable classification of clients according to degrees of severity for program evaluation and research purposes.

The FAI may also be useful in assessing functional limitations as an aid in training experienced counselors to work with severely disabled clients. The inventory seems useful in enabling students and new counselors to identify specific components and to find a starting point for counselor intervention.

ADMINISTRATION

Administration of the FAI requires professional judgment. The evaluator would need to consider various sources of information (e.g., client report, observation, work evaluation, physiological/psychological evaluations, etc.) in making this judgment. Space is provided for checking those limitations that could be reduced through the provision of rehabilitation services. The assessment would be appropriate soon after the client is admitted to service in an effort to make realistic and complete plans. It could also be used during termination of service to

make more suitable placements. The time required to complete the FAI is approximately 5-10 minutes.

SCORING

A total Functional Limitation (FL) score can be determined by simply adding the raw ratings for each item. Similarly, scale scores can be obtained by adding the ratings on all of the items within a given scale. The instrument can be scored by hand.

RELIABILITY

The FAI was subjected to testing of interrater reliability. An initial series of interviews was observed by varying pairs of counseling psychologists, and the FAI was completed by each observer. Agreement between raters was checked and discrepancies examined. Coding conventions were revised as necessary. Next, a series of 25 interviews was observed and rated by pairs of psychologists, but the ratings were not discussed. This series showed that 75% of the ratings made by the pairs of observers were identical. Only 3% of the ratings differed by more than one point on a four-point scale. As a result of this work, several items were revised and one item was added. A third series of 12 clients was then rated with similar results.

In a pretest of the FAI, proposed as an assessment tool of functional limitations to be included in the State-Federal VR Management Information System, groups of five counselors ($N=54$) viewed two videotaped interviews of VR clients prepared for the reliability study. The order of tape presentation was counter-balanced across groups, sessions, and states to eliminate order and practice effects. Each session was introduced with respect to its purposes and procedures. Following viewing of each tape, the counselors completed the FAI without conferring with one another. The FAI ratings for each tape were submitted to Cronbach's alpha and standardized item alpha analysis. For Tape 1, the reliability coefficient alpha was .788 and the standardized item alpha was .809. For Tape 2, the reliability coefficient alpha was .803 and the standardized item alpha was .806. These results indicate a considerable degree of reliability for the FAI when taken as an entire scale; coefficient alphas of .75 are considered quite acceptable. These may underestimate the actual reliability, since, for Tape 1, three items and in Tape 2, one item had zero variance which automatically excluded them from the analysis. Yet zero variance indicates complete agreement among the counselors. It can be concluded with some certainty that, taken as a whole, the FAI is reliable, and that the individual items were scored reliably as well.

VALIDITY

Over a nine-month period counselors completed the FAI on new clients ($N=351$) as they were accepted for services. Subjects were divided into eight groups according to their primary disability and frequency distributions were drawn for each item. Factor analysis of the Functional Limitation (FL) items was carried out to provide a basis for identifying underlying scales. The procedure was completed first on the total sample of 351 subjects and then repeated separately for 173 clients with a primary diagnosis of physical disability and then for the 152 with a primary diagnosis of behavioral disability. The strength items were omitted from factor analysis since they were not scaled in the same way as the FL items. The distribution of responses for each FL item reveals logical differences in ratings between disability groups.

Concurrent and predictive validity are being developed for the FAI. Concurrent validity is reflected in the correlations between counselor assessment of severity of disability and employability and the total FL score and number of strengths. Pearson correlations between each of these counselor ratings and total FL item scores and total strength scores were calculated for the total group of 351 subjects mentioned above as well as for the subgroups of physical ($N=173$) and behavioral ($N=152$) disabilities. For all subjects the correlation between total FL scores and Prediction of Employability was $-.61$. The correlation between total FL scores and Severity of Disability was $.60$. Among physically disabled clients the correlations between the total FL scores and the two ratings were $-.60$ and $.60$, respectively. Among behaviorally disabled clients the correlations were $-.64$ and $.60$, respectively. All of the correlations were statistically significant at the $.001$ level of probability.

The correlations between total strength item scores and the two counselor ratings were somewhat lower but still statistically significant. They were, of course, in the opposite direction of the correlations with the total FL scores. For all subjects the correlation between the total strength score and Employability was $.53$, and with Severity of Disability it was $-.21$. For physically disabled subjects the correlations were $.52$ and $-.30$, respectively.

Pearson correlations between the two global ratings of Prediction of Employability and Severity of Disability were also calculated for all 351 subjects and for the

subgroups of physical and behavioral disabilities. For the total group correlation was $-.51$. For clients with physical disabilities the rating of Prediction of Employability correlated $-.56$ with the rating of Severity of Disability. For clients with behavioral diagnoses the correlation between the two ratings was $-.52$. These correlations were all statistically significant at the $.001$ level of probability.

Predictive validity is based on the relationship between FL scores and strength scores and actual vocational outcome. For the Minnesota sample, substantial correlations were found between FAI measures (individual item scores, factor scores, and total FL and strength scores) and work status at closure. People who found competitive employment tended to have the least severe functional limitations while those in noncompetitive work had the most. People who were not working at all were in between the other two groups. Highly significant correlations were similarly found between FAI scores and earnings at closure with people in the higher earnings category having fewer limitations. People who were in the highest category with regard to service costs tended to have more severe functional limitations. Few significant differences were found between clients closed in Status 26 and those closed "not rehabilitated" because both sheltered and competitive workers were grouped in the former category. People who were still in the rehabilitation system three years after entrance had a unique pattern of functional strengths and limitations. Detailed information about these findings and other results from the field tests will be available in the FAI Manual which has recently been prepared for publication.

ADVANTAGES

The FAI is brief, yet comprehensive. It provides a basis for structuring the initial interview and making a vocational diagnosis. When the FAI is used with the Personal Capacities Questionnaire (discussed below), counselor and client perceptions of functional capacities can be compared.

The Personal Capacities Questionnaire (PCQ) provides counselors with direct information about how the client sees his/her limitations and strengths in 40 work-related areas. This could provide information about problems that would otherwise have been overlooked.

Field tests of the PCQ used jointly with the FAI are being planned. The relationship between PCQ scores and rehabilitation outcomes will be examined and norms established. Scales will also be identified, and the

correlations between the FAI and PCQ calculated. Until then the information obtained from the PCQ can be used as information gathered through the interviewing process would.

Both the FAI and the PCQ are available in braille and large-print editions.

LIMITATIONS

Normative and validation data on the PCQ are not yet complete.

REFERENCES

Crewe, N.M., & Athelstan, G.T. Functional assessment in vocational rehabilitation: A systematic approach to diagnosis and goal setting. Archives of Physical Medicine and Rehabilitation, 1981, 62, 299-305.

Crewe, N.M., Athelstan, G.T., & Meadows, G.K. Vocational diagnosis through assessment of functional limitations. Archives of Physical Medicine and Rehabilitation, 1975, 56, 513-516.

AVAILABILITY

Copies of the FAI, the PCQ, and other pertinent information can be obtained from:

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Box 297, Mayo Building
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CASE SUMMARY
FUNCTIONAL ASSESSMENT SYSTEM (FAS)

BRIEF HISTORY: Betty S. is a 48 year old widowed white woman who is successfully recovering from a stroke that she suffered one year ago which left her right side partially paralyzed and caused her to have mild slurring of speech. Betty has been living with her oldest daughter and son-in-law and their four children since her return from the hospital.

Recently Betty's daughter has been encouraging her to go to DVR to see if they can help her receive training for a career. Betty was married shortly after completing two years of college, and she spent all of her married life as a housewife. She has not been in the labor force for almost 30 years. Lately the children have been "getting on her nerves" and she has been avoiding all of her old friends and feeling very useless and depressed. Betty's daughter feels that it would help her a lot if she could find a satisfying job and begin to make a "new life" for herself.

FUNCTIONAL ASSESSMENT: Betty did apply for services from DVR and was assigned to a counselor named Steve. As part of the initial evaluation Steve did a functional assessment using the FAI. Before he did the ratings he held two hour-long interviews with Betty, spoke briefly with her daughter, and obtained medical records from her physician. He also got a copy of her college transcript and had her take several tests including the General Aptitude Test Battery, the Strong-Campbell Interest Inventory, and the California Personality Inventory.

On the FAI, Steve rated Betty as having no significant impairment of hearing or vision. He gave her ratings that reflected a mild impairment of ambulation with sufficient ability to get around independently in the community; partial loss of functioning in one extremity with the other working well; impairment of hand function to the degree that she could not perform most tasks requiring fine dexterity, speed, or coordination; mild impairment of either fine or gross motor coordination; motor speed that is slower than average; and an inability to do jobs requiring substantial physical exertion.

Ratings on endurance and loss of time from work indicated no significant impairment. Her condition was rated as stable if controlled by diet, treatment, or exercise since she needs daily range of motion in her weakened extremities and also requires counseling to deal with her depression.

Although it is not unusual for a stroke to cause problems with language functioning and memory, there was no evidence that this had happened in Betty's case. She seemed to have no

significant impairment of learning ability, perceptual organization, memory, language functioning, or ability to read or write. She was rated as having a mild speech impairment and no significant impairment with regard to judgment. On the basis of the daughter's description of Betty's inactivity at home as well as Betty's own complaints of difficulty with concentration and follow-through, Steve rated her as having a mild impairment in the area of persistence. She had been on time for all of her counseling and testing appointments, however, and she said that she really wanted to work, so no impairment was noted in terms of congruence of behavior with rehabilitation goals.

Betty certainly felt confused about what kind of work she might do--at first she said that she couldn't think of anything she might be qualified for (except possibly sweeping floors). Yet, her doubts seemed to be based only on lack of information about her capabilities and about job requirements, so a rating of mild impairment seemed most appropriate. Betty's usually pleasant disposition had changed as a result of her depression. She was despondent and withdrawn which was reflected in the item, effective interaction with people. Her family was very warm and caring, so she had no impairment of support system. Her appearance was unkempt, probably as a result of the reactive depression, so that was noted in the item, personal appearance.

Betty had no job specific skills, but Steve reasoned that her two years of college and her high average intellectual ability would be valuable in a wide range of jobs. On the other hand, since she had never worked outside the home and since her current functioning was impeded by depression, he believed that a period of work evaluation and adjustment training in a rehabilitation facility might be necessary before she would be ready to start a regular job.

Steve judged that Betty's total lack of employment experience constituted a moderate limitation. Age, together with her speech impairment and her depression-related problems, were also likely to interfere with her acceptability to employers. Betty lived in a city and could both drive and use public transportation, so she was not limited with regard to access to job opportunities. She also had no financial disincentives to working.

In terms of strengths, Steve identified an exceptionally understanding and supportive family. He rated Betty a 3 on a 7 point scale of severity of disability (moderately disabled) and predicted that she had a good chance of becoming employed (rating of 3 on a 4 point scale).

FAI Factor Scores for Betty: Raw scores and percentile ranks based upon normative data.

<u>Factor</u>	<u>Raw Score</u>	<u>Percentile Rank</u>
Adaptive Behavior	5	75.8
Motor Functioning	4	92.9
Cognition	0	30.2
Physical Condition	3	63.9
Communication	1	85.8
Vocational Qualifications	5	72.5
Vision	0	45.4

FUNCTIONAL SELF-EVALUATION: Betty completed the Personal Capacities Questionnaire, and when she was finished she sat down with Steve to compare their ratings of functional capacity. On over half of the ratings their scores were the same, but there was some discrepancy on the others. In some cases the differences resulted from subtle disparities in wording of the items on the two instruments (FAI and PCQ), and at other times they represented differences in the "insider's" and "outsider's" perspectives. The latter cases led to some valuable counseling discussion.

Betty rated herself as more impaired than the counselor did in terms of upper extremity function, coordination, and speed. Compared with the industrious, efficient person she used to be, she believes that she is terribly slow and uncoordinated, but Steve was comparing her with other clients and on that basis found her only mildly impaired. Betty's rating on endurance indicated that she fears she is not up to holding a full time job. Discussion revealed this was not based on any specific limitations, but only on insecurity since she has not held a job before. The planned work evaluation should be helpful in demonstrating her degree of endurance.

Sample FAI item as Steve rated it.

ENDURANCE

0. No significant impairment.

1. Can work a full day with special rest periods arranged.
2. Can work only about half-time.
3. Unable to work for more than one or two hours a day.

Sample PCQ item as Betty rated it.

ENDURANCE & AVAILABILITY FOR WORK

0. I can work a regular full-time job.
1. I can work a full-time job if special rest periods are provided.
2. I can work only about a half-time job.
3. I can work only an hour or two per day.

Betty rated herself as having a mild impairment of learning ability and moderately severe difficulty with memory. Although she had been a good student, depression and low self-esteem were affecting her thinking and concentration, so she felt stupid. The same factors led her to rate herself as having a moderate impairment of judgment, and severe impairments of persistence and awareness of capabilities and limitations. She also expressed her low self-esteem by indicating that "most employers wouldn't even consider hiring me."

In spite of her tendency to rate herself as having more severe limitations than Steve had perceived, she also checked three strength items rather than one. She indicated that she has a very pleasing personality, an extremely understanding family, and no financial worries that could interfere with rehabilitation. She rated herself as 5 in terms of severity of disability and 2 (fair chance) on employability.

GOAL SETTING: After discussing both of their ratings, Betty and Steve identified several areas of functional limitations which they felt could be relieved by means of rehabilitation services. They used the Rehabilitation Goals Identification Form to translate those areas of limitation into behavioral and measurable goals and set a follow-up date for three months later. They decided to have Betty begin a work adjustment and evaluation program at a local rehabilitation facility to build her endurance and her work habits (FAI items 9 and 26). They also agreed that her interactions with people (item 22) would be improved if she were to reverse her pattern of withdrawal and force herself to begin getting out with old friends and making new ones. Finally, they agreed that both her family relationships and her vocational prospects would be enhanced if she were to move out of her daughter's home and into a place of her own, so they established a goal related to living arrangements. For each area, a target goal was set for three months hence. That target was centered within a spectrum of five possible outcomes, ranging from the least that could be expected to the most that might be accomplished in that period. The services which would be provided to facilitate the goal were specified. When the time period had elapsed, progress would be evaluated and new goals set in the same or different areas as the next step toward the ultimate goal of employment.

IMPACT OF THE PROCESS ON VOCATIONAL REHABILITATION: Use of the Functional Assessment System provided several benefits in this case.

- * The FAI specified a wide range of functional areas for Steve to explore before moving ahead with a vocational plan.
- * The PCQ demonstrated to Betty the many factors that can affect the success of a vocational plan. It also provided her with an opportunity to describe to Steve her strengths and limitations as she saw them.
- * The comparison of ratings on the FAI and PCQ alerted both Steve and Betty to differences in the way they perceived her capabilities and provided the basis for lively dialogue in counseling. It also provided Steve with an opportunity to recognize Betty's insecurities and to provide extra support during the early steps of rehabilitation.
- * Functional limitations were examined to see which ones might be amenable to change as a result of rehabilitation services. From among that group, a small number were chosen as highest in priority. Using the Rehabilitation Goals Identification Form, the limitations were translated into behavioral, measurable outcome statements.
- * A specific schedule for evaluation of outcomes was set together with a mechanism for revising and renewing goals until closure is reached.

INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC) EXPERIMENTAL EDITION

DEVELOPER(s)

The ILBC was developed by Richard T. Walls, Thomas Zane, and John E. Thvedt at the West Virginia Rehabilitation Research and Training Center and copyrighted in 1979.

PURPOSE

The ILBC provides a measure of objective skills relevant to independent living by defining the degree to which a client or trainee, using whatever adaptive devices required, can function without constant aid and/or supervision.

DESCRIPTION

The ILBC is a list of 343 independent living skill objectives specified in terms of conditions of performance, specific behavior, and standards of performance. The objectives assess skills in the following six categories: mobility skills, self-care skills, home maintenance and safety skills, food skills, social and communication skills, and functional academic skills.

USE

The ILBC is useful for any client whose independent living skills need to be identified and/or developed. Specific client groups might include mentally retarded, blind, quadriplegics, clients institutionalized for long periods of time, severely disabled, etc. The ILBC can be used in a variety of settings, such as sheltered workshops, rehabilitation facilities, educational/training programs.

The ILBC is valuable to various professionals associated with the rehabilitation and/or training of independent living clients. Counselors preparing Individualized Written Rehabilitation Plans (IWRPs) will find that the ILBC provides a means of setting goals and evaluating the client's progress. It defines independent living skills clearly, specifies a broad range of skills applicable to a variety of necessary activities of daily living, and sets clear standards for mastery of skills. Program managers and program evaluation specialists will find skill objectives specified in terms of conditions, behavior, and standards permit documentation of client or trainee progress as well as a measure of the effectiveness of

services and/or training. Additionally, the ILBC provides them a means of setting goals, determining accountability, documenting legislative requirements, and outlining an objectively specified curriculum for independent living skills. The flexibility of this instrument is heightened in that only skill objectives deemed relevant need to be used and additional skill objectives can be developed as needed.

The ILBC is equally valuable to other professionals. Teachers responsible for developing Individualized Education Plans (IEPs) can use the ILBC to set goals and evaluate progress. Cottage or group home parents/supervisors will find specification of a broad range of adaptive skills applicable to a wide variety of living environments. Administrators of independent training programs will find an objective means for developing accountability, cost-effectiveness, staffing patterns, state plans, and funding applications.

ADMINISTRATION

The use of the ILBC requires professional judgment, but paraprofessionals may easily be trained. The ILBC can be administered as often as necessary to maintain an accurate view of the client's competence. In some instances a single assessment of skill objectives may be sufficient, but in other cases a periodic assessment of client or trainee skills is desirable. Administration is achieved by observing the client; the time necessary varies depending on the number of objectives deemed appropriate for the individual client.

SCORING

A Skill Summary Chart and a Skill Objective Profile are developed. The Skill Summary Chart is used as an overall record of all the skill objectives achieved by the client in all six categories. The skills mastered by the client in initial assessment and in training, as well as the date the skill was demonstrated or completed, are entered on the Skill Summary Chart. For any skill objective mastered, a "+" is entered. For any objective failed in initial assessment, a "-" is entered. The date training was begun and the date training was completed (the skill was mastered) are recorded. The summary column provides a concise view of the skill objectives mastered in either initial assessment or training, and so summarizes the individual client's progress to date in each skill category.

The Skill Objective Profile allows for a quick survey of overall client progress in each of the six skill

categories. The profile is constructed by dividing the number of skill objectives mastered in a category by the total number of skill objectives considered applicable to the client in that category, multiplied by 100. The instrument is hand scoreable.

RELIABILITY

The ILBC is considered in terms of reliability as stability, and reliability as interobserver agreement. Reliability as stability was assessed using test-retest procedures (two weeks between tests). Two observers rated video presentations of five rehabilitation clients performing five randomly selected skill objectives from each of the six skill areas (i.e., mobility, self-care, etc.). Stability across six categories ranged from 96% to 100% using two observers. The overall mean stability of the ILBC was 98.0%. An index of interobserver reliability was computed by comparing the scores of Observer 1 and Observer 2 at Time 1. Interobserver reliability across all six categories ranged from 96% to 100%. The overall interobserver reliability of the ILBC was 98.7%.

VALIDITY

The skill objectives of this behavioral checklist are samples of situations. Content validity is an indication of how well the skill objectives sample the particular situation, i.e., independent living skills. Content validity does not yield a numerical value but rather gives a clear definition of the universe represented and describes the procedure followed in the sampling from that universe. Construction of the ILBC began with more than 200 behavioral checklists collected from rehabilitation facilities and schools throughout the United States and other countries. Of these checklists, 53 were selected which contained items found to be constructed well enough to suggest ways to assess independent living behaviors. Thus, the universe was based on the experience of many training facility and independent living personnel spread over a wide geographic area. Rather than sampling from this broad array of behaviors, the entire universe was used to suggest skill objectives for mobility, self-care, home maintenance and safety, food, social and communication, and functional academic skills. While the ILBC fills apparent gaps in existing measures, the content of the ILBC captures the collective experience and judgment of an impressive array of training personnel. It is more comprehensive than the wisdom and experience of a single facility, staff, or training group. Thus, the content validity of the ILBC must be considered high.

Criterion-related validity was examined by determining how closely the skill objectives of the ILBC conform to those behaviors that have been found necessary to actually live in an independent setting. Both laboratory and field-based research have contributed to the development of the Nebraska Assessment for Independent Living (Schwab, 1979). Research and development of the Nebraska skills involved work with emotionally disturbed short-term patients in state hospitals, a broad range of vocational rehabilitation clients in a field setting, and severely handicapped cerebral palsied clients. In each of these settings, the behaviors have been narrowed and refined to yield the present set of skills relevant to independent living. The behaviors identified by the Nebraska group as being crucial for independent living were examined by Walls, Zane, and Thvedt (1979) after the skill objectives for the ILBC had been completed. Thus, a high degree of agreement between what has been found important in contributing to independence and the ILBC would indicate high criterion-related validity. All of the 17 categories defined by Schwab (1979) as essential for independent living were found to be included in the ILBC. The criterion-related validity with this extensively researched Nebraska source was 1.0 (100%). The user may have confidence that the ILBC includes the important and relevant skills for independent living.

ADVANTAGES

The skills to be assessed by the ILBC can be adjusted to suit the type of training and/or the individual needs of the client or trainee. This is accomplished by selecting only those objectives which are relevant or writing additional objectives which are needed.

LIMITATIONS

Because skill objectives may be added, deleted, and/or changed, the ILBC is simply a checklist of skills (criterion-referenced measure); it is not a standardized instrument (norm referenced).

REFERENCES

- Schwab, L.O. The Nebraska assessment for independent living (Project 93-103). Lincoln, Nebraska: Department of Human Development and the Family, University of Nebraska, 1979.
- Walls, R.T., Zane, T., and Thvedt, J.E. The independent living behavior checklist (experimental edition). Dunbar, WV: Research and Training Center Press, 1979.

AVAILABILITY

Copies of the ILBC and other pertinent information is available from:

Publications Department
West Virginia Rehabilitation Research
and Training Center
One Dunbar Plaza, Suite E
Dunbar, WV 25064

CASE SUMMARY INDEPENDENT LIVING BEHAVIOR CHECKLIST (ILBC)

The ILBC is simply a collection of skill objectives to be used in whatever way a particular trainer or program finds helpful. Many programs use it to help write an individual written plan for the client. Such written educational plans are required to include specific performance objectives. Since the ILBC is not a standardized test, programs often select some skill objectives from the ILBC, modify some skill objectives, and/or write new ones. The following three options are provided by the ILBC.

1. Deleting skill objectives that are not appropriate.
2. Adding new skill objectives that may be needed. These should be written in the same format as the ones included here. Some blank forms at the end of the chapter are provided for that purpose.
3. Modifying existing skill objectives by adapting (a) conditions and instructions, (b) behaviors, and/or (c) standards to suit a client with particular needs or handicapping conditions or to better suit the purpose of training.

As an example of possible use of the ILBC in a client's written plan, consider the case of C.L.B. The area selected by trainer, parent, and C.L.B. for the coming year was Social and Communication Skills. Among the skill objectives selected for C.L.B. to be tested on and to work on, if necessary, were skill objectives 54 through 61 in the Social and Communication Skills chapter. C.L.B.'s mother and all concerned agreed that these telephone skills would be helpful for her independence. Two of those skill objectives are the following.

PHONE NUMBER 54

CONDITION:	Given a telephone book (white or yellow pages), a telephone (home or pay), and the name of a person or business to call.
BEHAVIOR:	Client locates the phone number.
STANDARD:	Behavior within 5 minutes. The desired number must be found.

OPERATOR 57

- CONDITION:** Given a telephone and a reason to call the operator (e.g., difficulty in making a call or an emergency).
- BEHAVIOR:** Client calls the operator.
- STANDARD:** Behavior within 1 minute. The operator must be reached.

During the first training session, the trainer assessed C.L.B.'s ability to perform skill objectives 54 through 61. Her skill summary chart looked as follows after this initial assessment.

Summary	Skill Objective	Initial Assessment		Training	
		+ or -	Date	Date Begun	Date Completed
☒	~~53 Ticket~~	☒	<u>1 / 1</u>	<u>1 / 1</u>	<u>1 / 1</u>
☐	54 Phone Number	☐	<u>3/21/82</u>	<u>1 / 1</u>	<u>1 / 1</u>
☐	55 Local Call	☐	<u>3/21/82</u>	<u>1 / 1</u>	<u>1 / 1</u>
☐	56 Long Distance Call	☐	<u>3/21/82</u>	<u>1 / 1</u>	<u>1 / 1</u>
☐	57 Operator	☐	<u>3/21/82</u>	<u>1 / 1</u>	<u>1 / 1</u>
☐	58 Information	☐	<u>3/21/82</u>	<u>1 / 1</u>	<u>1 / 1</u>
☐	59 Emergency Call	☐	<u>3/21/82</u>	<u>1 / 1</u>	<u>1 / 1</u>
☒	60 Hello	☒	<u>3/21/82</u>	<u>1 / 1</u>	<u>1 / 1</u>

From the skill summary chart you can see that the only skill objective that was shown to be mastered during initial assessment was #60 (Hello). That skill objective requires that the client pick up the phone when it rings and say, "hello." Accordingly, C.L.B.'s training over the next couple weeks consisted of practice and help on skill objectives 54, 55, 56, 57, 58, 59, and 61. At the end of that time, her skill summary chart (below) revealed mastery of all skill objectives.

Summary	Skill Objective	Initial Assessment		Training	
		+ or -	Date	Date Begun	Date Completed
☐	~~53 Ticket~~	☐	<u>1 / 1</u>	<u>1 / 1</u>	<u>1 / 1</u>
☒	54 Phone Number	☐	<u>3 / 21 / 82</u>	<u>3 / 22 / 82</u>	<u>3 / 29 / 82</u>
☒	55 Local Call	☐	<u>3 / 21 / 82</u>	<u>3 / 22 / 82</u>	<u>3 / 23 / 82</u>
☒	56 Long Distance Call	☐	<u>3 / 21 / 82</u>	<u>3 / 22 / 82</u>	<u>3 / 24 / 82</u>
☒	57 Operator	☐	<u>3 / 21 / 82</u>	<u>3 / 22 / 82</u>	<u>3 / 23 / 82</u>
☒	58 Information	☐	<u>3 / 21 / 82</u>	<u>3 / 22 / 82</u>	<u>3 / 23 / 82</u>
☒	59 Emergency Call	☐	<u>3 / 21 / 82</u>	<u>3 / 22 / 82</u>	<u>3 / 23 / 82</u>
☒	60 Hello	☒	<u>3 / 21 / 82</u>	<u>1 / 1</u>	<u>1 / 1</u>

THE LEVEL OF REHABILITATION SCALE (LORS-I)

DEVELOPER(s)

The LORS was developed by Raymond G. Carey of Parkside Medical Services Corporation in Park Ridge, Illinois, and Emil J. Posavac of Loyola University of Chicago, Illinois, in 1977. Parkside is affiliated with the Lutheran General Medical Center.

PURPOSE

The LORS is designed to provide a general assessment of patient functioning for the purpose of program evaluation rather than for clinical assessment. It provides an assessment of overall functioning as an inpatient and as an outpatient in order to evaluate patient progress after discharge from the hospital or health care facility.

DESCRIPTION

The LORS contains five subscales which measure the following: activities of daily living, or ADL (e.g., walking, grooming, transfer, etc.); cognition (e.g., speaking, reading, writing, etc.); home activities (e.g., cooking, housework, hobbies, etc.); outside activities (e.g., shopping, spectator events, trips, etc.); and social interactions (e.g., participating in games with others, etc.). The scale contains 47 items.

USE

The LORS is designed to be used with all clients in a physical medicine and rehabilitation unit. It seems more useful to physical medicine and rehabilitation unit personnel or rehabilitation facility personnel than to VR case managers or program managers. Inpatient rehabilitation teams have used the information gathered from the LORS to monitor the overall level of program success and to satisfy the program evaluation requirements of the Commission on Accreditation of Rehabilitation Facilities.

The LORS has been revised recently. The new version, the LORS-II, is described in a separate entry. The original LORS is more useful than the revised LORS in those instances where the focus is on post-discharge function.

ADMINISTRATION

The LORS should be administered at admission (within three days of admission), at discharge, and again once the patient has had an opportunity to return home and readjust to the home routine (generally about six weeks after discharge). If one chooses to base ratings on direct observations, experienced clinicians would be required (e.g., physical therapists, occupational therapists, physicians, or nurses). However, clerical personnel can be trained to interview skilled clinicians and make the ratings. The same clerical personnel can conduct telephone interviews with family members to conduct follow-up interviews once the patient is home. It is necessary that the interviewer be thoroughly familiar with the scoring code guide before beginning interviews. The guide is not complicated but it is extensive and cannot be referred to during the interview. Administration of the LORS requires 10-20 minutes.

SCORING

Each of the activities making up the five major categories of the LORS is rated on a scale from zero to four by a trained interviewer. A coding manual is available which describes the numerical ratings in behavioral terms. Because the activities in the Cognition subscale have a limited overt behavior component (e.g., reading), the functional level ratings of cognitive abilities require more judgment on the part of the interviewer than the other subscales.

Once individual ratings have been made, subscale scores (e.g., ADL, Cognition, etc.) are obtained by summing the item ratings for each subscale and converting these sums into percentages of normal functioning. When the spouse or nurse has not had an opportunity to observe a particular activity, the interviewer makes no rating of that activity, and the omission is not "held against" the patient; the score is adjusted for the unavailable ratings. A summary sheet accompanying the scale contains formulas to assist in converting sums into percentages.

RELIABILITY

In developing the LORS, ten interviews were conducted with two trained interviewers present in order to examine the interrater reliability. One interviewer made ratings based on the informant's answers but did not otherwise participate in the interview. The correlations between the two interviewers for the ADL and Cognition subscales were .97 and .96, respectively.

Inter-informant reliability was assessed for 30 patients when both nurses and spouses were interviewed concerning the clients' abilities at admission. The correlation between ratings based on the nurse admission interview and the spouse admission interview for ADL was .82. For Cognition it was .86. For another perspective on inter-informant reliability, two nurses were interviewed independently at discharge for 23 patients. For ADL, the discharge inter-informant reliability was .95, and for Cognition it was .89.

The internal consistency of each subscale was examined by calculating the homogeneity coefficient. This coefficient is used to determine whether the subscales of the LORS are measures of single variables or whether the subscales are heterogeneous. Cronbach's alpha was used with each administration of the LORS. The mean alpha coefficient for ADL was .93; for Cognition, the mean alpha was .88. The homogeneity coefficients were equivalent whether they were calculated on the basis of nurse ratings or spouse ratings. The remaining three subscales were only administered to the spouse and were shorter than ADL and Cognition. The alpha coefficients were .85 for Home Activities, .76 for Outside Activities, and .64 for Social Interactions.

The LORS possesses good interrater reliability and inter-informant reliability. The homogeneity for ADL and Cognition was also excellent. The lower homogeneity coefficients for Home Activities, Outside Activities, and Social Interactions should be evaluated against the purpose of the LORS. If the LORS is used to estimate the overall functioning of a group of program evaluation purposes, these subscales possess adequate homogeneity. These three scales, however, are not of sufficient purity to use confidently as assessment instruments for individual patients.

VALIDITY

Convergent and discriminant validity were constructed to determine if the ADL and Cognition subscales are distinct from one another. Ratings on these two subscales were available from both a nurse and spouse for 30 patients. If ADL and Cognition are distinct abilities, then correlations of the ratings of ADL and Cognition should be lower than the inter-informant reliability of both ADL and Cognition. Inter-informant correlations of ADL (.82) and Cognition (.86) exceed the correlations between ADL and Cognition for both nurses (.59) and spouses (.50).

Criterion validity was constructed to determine if the subscales reflect known differences among clients.

Although based on a small sample, subscales did discriminate between left and right hemiplegic CVA patients as expected. Left hemiplegic CVA patients experience perceptual difficulties while right hemiplegic patients suffer greater speech difficulties. The subscales correctly detect these differences in that Cognition scores are higher for left hemiplegic CVA patients both at admission and at discharge; however, right hemiplegic CVA patients improve more on ADL since they are less burdened by perceptual problems.

ADVANTAGES

Some of the advantages of using the LORS include the following: It is relatively inexpensive, it is useful in providing a quantitative assessment of functioning for both inpatients and outpatients, and it is behaviorally anchored and useful in documenting improvements resulting from medical care.

LIMITATIONS

The LORS is intended to provide a global measure of functioning and not to be a clinician's tool. Also, a few items on the ADL and Cognition subscales are concerned with areas that cannot be changed by rehabilitation services.

REFERENCES

Carey, R.G., & Posavac, E.J. Manual for the Level of Rehabilitation Scale in Functional limitations: A state of the art review. Falls Church, VA: indices, inc., 1978.

Carey, R.G., & Posavac, E.J. Program evaluation of a physical medicine and rehabilitation unit: A new approach. Archives of Physical Medicine and Rehabilitation, 1978, 59, 330-337.

Posavac, E.J., & Carey, R.G. A method of program evaluation in rehabilitation settings. ARN Journal (now called Rehabilitation Nursing), 1979, 4, 5-7.

AVAILABILITY

The LORS, along with the manual, scoring codes, rating sheets, and scoring aids, is available from:

Raymond G. Carey, Ph.D.
Director
Health Care Evaluation Division
Parkside Medical Services Corp.
1580 N. Northwest Highway
Park Ridge, IL 60068

Information on LORS-II can also be obtained from the above source.

THE REVISED LEVEL OF REHABILITATION SCALE (LORS-II)

DEVELOPER(s)

LORS-II was developed by Raymond G. Carey of Parkside Medical Services Corporation in Park Ridge, Illinois and Emil J. Posavac of Loyola University of Chicago, in 1980. Parkside Medical Services is affiliated with Lutheran General Medical Center in Park Ridge, Illinois.

PURPOSE

LORS-II is designed to provide a general assessment of patient function for the purpose of program evaluation and accreditation rather than for clinical assessment. It provides an assessment of overall functioning while an inpatient and later after discharge.

DESCRIPTION

LORS-II contains three categories of function: activities of daily living, or ADL (e.g., dressing, grooming, washing, toileting, and feeding), mobility and communication. Communication is divided into verbal (i.e., oral and audible), gestural, and written communication. The scale contains 11 items.

USE

LORS-II is designed for use with all patients in a physical medicine and rehabilitation unit. It is used by physical restoration personnel rather than vocational rehabilitation counselors. The overall progress of patients can be monitored and the overall performance of the unit can be compared with the performance of other units. The instrument is being used to satisfy the program evaluation requirements of the Commission on Accreditation of Rehabilitation Facilities. LORS-II is especially useful for settings needing an inexpensive instrument which can be used repeatedly during a patient's stay. The main focus is on inpatient improvement.

ADMINISTRATION

LORS-II is usually administered at admission (within three days of admission), at discharge, and again 90 days after discharge. Clerical personnel obtain ratings from clinical staff members while the patient is hospitalized. Both nursing staff members and therapists provide ratings of inpatients. Trained clerical or clinical staff members telephone outpatients. Depending on the former patient's

level of dysfunction either a family member or the former patient provides information on the level of the patient's function. It is necessary that the person making the telephone calls be thoroughly familiar with the scoring codes. The ratings of function can be completed in less than ten minutes.

SCORING

Each of the activities making up the LORS-II is rated on a zero to four scale by a trained interviewer. A coding manual is available which describes each numerical value in behavioral terms developed in close cooperative work with clinical workers.

Once individual ratings have been made, subscale scores are calculated for ADL, Verbal Communication, and Written Communication. These values are converted into percentages of possible scores. These percentages form the material that is returned to the rehabilitation team. Tabular and graphical summaries are available.

RELIABILITY

The original LORS, using many of the same behaviorally-anchored rating scales, was studied to determine the reliability of these kinds of functional ratings. As reported in Archives of Physical Medicine and Rehabilitation article in 1978, interrater reliability for ADL was .97 and for Cognition (from which the Communication items were taken) was .98.

For patients who had been at home for a period before admission, ratings were obtained from both a spouse and the nurse at admission. These inter-informant reliabilities were in the .80's. At discharge, two nurses were independently interviewed. The inter-informant reliability at discharge was above .89. Since the LORS-II is shorter than the original LORS, it is expected that the reliability of LORS-II will not be as high as these figures. However, the same pattern of rating scales are used by both instruments.

VALIDITY

Criterion validity was calculated to determine if the subscales reflect known differences among patients. Left and right CVA patients differ on Communication as would be expected; those with left hemisphere damage communicate less well.

ADVANTAGES

The LORS-II provides external norm data, a report service with consultation, and is relatively inexpensive. It satisfies the CARF standards for program evaluation systems. The behaviorally-anchored ratings can be made fairly objectively and learned by individuals without clinical training.

LIMITATIONS

LORS-II is intended as a program evaluation tool, not as a tool for clinical assessment or for treatment planning.

REFERENCES

Carey, R.G., & Posavac, E.J. Rehabilitation program evaluation using a revised Level of Rehabilitation Scale (LORS-II). Archives of Physical Medicine and Rehabilitation, 1982, 63, 367-370.

Posavac, E.J., & Carey, R.G. Using a level of function scale (LORS-II) to evaluate the success of inpatient rehabilitation programs. Rehabilitation Nursing, 1982 (Nov-Dec), 7, 17-19.

Posavac, E.J., & Carey, R.G. Characteristics of useful and cost-effective methodologies of outcome evaluation in rehabilitation programs. Journal of the Organization of Rehabilitation Evaluators, 1982, 2(1), 19-27.

AVAILABILITY

LORS-II, along with the manual, scoring codes, rating sheets, and norms, is available from:

Raymond G. Carey, Ph.D.
Director
Health Care Evaluation Division
Parkside Medical Services Corp.
1580 N. Northwest Highway
Park Ridge, IL 60068

Information on the original LORS can also be obtained from the above source.

CASE SUMMARY LEVEL OF REHABILITATION SCALE (LORS-II)

Since the LORS-II is used for program evaluation of inpatient PM&R units, a case illustrating the use of the instrument is based on a rehabilitation unit, not an individual patient. The following material was excerpted from reports prepared for one of the hospitals using LORS-II. The tables actually provided are more detailed than can be included in the space available here.

First, patients are divided on the basis of whether they could be assessed three months after discharge. The former patients who cannot be assessed are in nursing homes, no longer in the area, or deceased. Those living in their own or their relatives' homes usually can be reached for the follow-up assessment. Rehabilitation units receive a table such as one below, reprinted from the Archives of Physical Medicine and Rehabilitation.

Table 1: Level of Function For Patients After Discharge Using LORS-II

	Admission		Discharge		3-month followup
Activities of daily living n = 167	Rater = RN	OT	RN	OT	Relative
	Rating = 55%	55%	78%	77%	76%
Mobility n = 166	Rater = RN	PT	RN	PT	Relative
	Rating = 38%	43%	67%	68%	75%
Communication skills	Rater = RN	ST	RN	ST	Relative
Verbal (n=53*)	Rating = 44%	51%	58%	62%	71%
Gestural (n=19*)	Rating = 19%	22%	51%	51%	61%
Written (n=24*)	Rating = **	24%	**	43%	**

**These ratings are not requested.

Raters: RN = primary nurse; OT = occupational therapist;
PT = physical therapist; ST = speech therapist.

As can be seen, patients are assessed both by nurses and therapists while in the program and by relatives after discharge. A separate table is provided for those former patients who could not be reached after discharge. These tables permit staff to track the amount of improvement for all patients regardless of diagnosis.

The most value from using LORS-II comes from an examination of the observed degree of improvement compared to previous level of success in helping patients to increase their functional levels. A unique aspect of LORS-II is that improvement norms have been developed for left and right hemiplegic CVA patients. (Norms for additional diagnostic categories are in the process of development.) The use of the norms enables rehabilitation staffs to detect changes in the improvement experienced by their patients.

To most profitably use functional norms it is necessary to take the functional deficit of the patients into account, rather than treating CVA patients as a homogeneous group. This is necessary because both the most severely impaired, as well as the least impaired, improve less than moderately impaired CVA patients. The most impaired patients seem unable to achieve great gains, while the least impaired can show less improvement because they are functioning at nearly the highest levels on LORS-II scales. Consequently, most improvement is observed from patients with LORS-II ratings in the middle ranges. Using admission ratings and the normative graphs, expected discharge values can be found for ADL, Mobility, and Communication. In addition, we have learned that length of stay in the program is related to the level of mobility at admission; the less mobile patients are, the longer they are likely to stay on rehabilitation units.

Using LORS-II norms provides a way for PM&R units to compare themselves to other units even though the average patient may be more or less dysfunctional than the average patient in comparison programs. This phase of the feedback to units is illustrated in Table 2, presented on the following page. "Expected" values were obtained from LORS-II norms, based on the Admission ratings given in Table 2. In this excerpted material, one can see that Right CVA patients improved as much as expected in ADL, improved more than expected in Mobility, and stayed exactly as long as expected for their level of dysfunction. In contrast, Left CVA patients were discharged below expectations for ADL and Mobility. Furthermore, they stayed in the program for fewer days than would have been expected for their level of dysfunction. These findings suggested that at least some of these Left CVA patients were being discharged sooner than desirable for achieving a good level of improvement. Staff members decided to make a close examination of the CVA patients in the quarter involved to learn whether their discharge policy was optimal.

Without normative information it would have been impossible to have detected this difference in the degree of rehabilitative success between Left and Right CVA patients.

Table 2. Median LORS-II Ratings and Expectations of ADL, Mobility, for CVA Patients in Past Quarter.

Measure	Right CVA*	Left CVA*
Activities of Daily Living		
Admission level (%)	43	50
Discharge level (%)	75	78
Expected discharge level (%)	75	88
Mobility		
Admission level (%)	24	31
Discharge level (%)	65	72
Expected discharge level (%)	49	78
Length of Stay		
Admission level of Mobility (%)	24	31
Length of stay (days)	34	26
Expected length of stay (days)	34	34

*"Right CVA" refers to left hemiplegic CVA patients. "Left CVA" refers to right hemiplegic CVA patients.

LIFE FUNCTIONING INDEX (LFI)

DEVELOPER(s)

The LFI was developed by Ralph R. Turner, Abt Associates Inc., Cambridge, Mass. under contract to the Rehabilitation Services Administration (Contract #105-78-4012) in 1981-1982.

PURPOSE

The LFI provides a "snapshot" of a client's status in six life functioning areas by providing a numerical score for ordinal scales.

DESCRIPTION

Six life functioning areas related to vocation, education, self-care, residence, mobility, and communication are assessed by selecting the descriptive category (e.g., high school degree) which most closely describes the client. The scale yields ten scores for each client.

USE

The LFI is appropriate for all VR clients. It is designed to provide: (1) a profile of the client's life functioning at a single point in time (one administration), (2) a caseload profile for the counselor, the district office, or the agency, (3) an index of change in the client's life functioning upon re-administration (e.g., at closure), (4) an aggregated index of change for the several levels of interest, and (5) a means for setting goals and measuring their attainment.

The LFI is used by VR counselors as a quick tool for organizing information about the client and the particular caseload, and by the administrator for an agency index of functioning, change, and goal attainment.

ADMINISTRATION

The LFI is completed by the counselor on a standard answer sheet. (Special purpose sheets have been developed by VR agencies for compatibility with existing data collection forms.) The counselor uses the information gathered by interview, record examination, and other standard sources. Pilot testing indicates that five to ten minutes are required.

Training materials are being developed which will permit self-study. Each category has operational definitions to guide the choice. Practice with standard materials, in concert with an experienced user, is recommended.

SCORING

Each category (some have multiple parts) yields a "score" which reflects the client's standing on a particular ordinal life functioning scale. The maximum score within each scale ranges from 4 to 9. Multiple administrations, for example at application and at closure, provide the data for change analysis.

RELIABILITY

Interrater reliability assessed using 60 VR counselors from two state agencies in "live" settings yielded alphas of .74 and .79 for two standardized sets of materials.

VALIDITY

Work is currently underway to provide evidence for validity.

ADVANTAGES

The LFI provides a standardized "snapshot" of a client and/or a caseload quickly and reliably and at low cost. Such a snapshot permits, for example, the targeting of certain kinds of services should life functioning areas be uniformly "low" across disability types. It also permits the administrator to summarize the caseload across important categories. Finally, assessing change in a broad arena provides information which can be used to guide eligibility and resource allocation decisions.

LIMITATIONS

The LFI is a broad stroke instrument. It does not provide the counselor with in-depth information concerning the client. For some clients, the categories do not precisely fit.

REFERENCES

Turner, R.R. Functional assessment in vocational rehabilitation: A client data pretest. Final Report. Contract No. 105-78-4012. Cambridge, MA: Abt Associates Inc. June, 1982.

AVAILABILITY

The LFI, including the User's Guide and the Training Materials, can be obtained by contacting:

Dr. Ralph R. Turner
Abt Associates Inc.
55 Wheeler Street
Cambridge, MA 02138

NOTE: A modification of the LFI is scheduled to be incorporated into the RSA-911 which will replace the RSA-300 form completed by all state VR agencies.

CASE SUMMARY
LIFE FUNCTIONING INDEX (LFI)

This example is designed to provide a simple, and preliminary, example of LFI scoring, goal setting, and change score analysis.

For this example, assume the client has made application to the state Division of Vocational Rehabilitation district office, has been interviewed and has supplied records, and has been accepted for services.

The client is a 19 year old male, Caucasian, C6 paraplegic attending a local state college. He has never held a competitive job, and is enrolled in a baccalaureate accounting program. He lives on campus with an attendant/roommate; he uses a wheelchair. He does not drive but is enrolled in a driver's education program for disabled drivers.

While this sketch is brief, it gives the reader an outline of the client. The counselor, over the course of the case, may choose to use the LFI for three purposes. First, the intake status of the client can be assessed. Second, the counselor and the client may choose to set goals for the course of the case. And, third, the counselor may select to assess change in the client's status at closure. Presented in the table below are examples of the scores that this client may have been given. The reader should refer to the attached standard answer sheet. More complete operational definitions are provided in the User's Guide.

From these sets of scores several pieces of information are summarized. First, there is variability across the scale at intake. The scores reflect that the client is a student (A), has a high school education (B), needs no supervision (C1), needs assistance 3 to 4 hours a day (C2) 4 to 5 days a week (C3), lives in a dorm (D), has access limited to the neighborhood (E), and has no impairment in either expressive (F1) or receptive (F2) communication.

The client and the counselor jointly set a series of goals; these are reflected in the Goals column and can be compared with the intake values. For some areas, no goals were appropriate since the client had no impairment and deterioration--prevention was not planned.

	<u>Intake</u>		<u>Goals</u>	<u>Closure</u>
A. Vocation	5		9	9
B. Education	3		6	6
C1. Self-Care: Supervision	2		NA	2
C2. Self-Care: Assistance 1	4		5	4
C3. Self-Care: Assistance 2	2		3	3
D. Residential	4		6	6
E. Mobility	3		4	3
F1. Communication: Expressive	4		NA	4
F2. Communication: Receptive	4		NA	4

This client was successfully closed upon graduation and the closure values are reflected in the third column. Improvement is found in two areas (Vocation and Self-Care: Assistance 2) and goals were met in four areas. Goals were not reached in two areas but there was no deterioration in any of the categories.

This example demonstrates how status and change can be summarized for a client (and, by extension, to the caseload) quickly and easily. While no new, or "clinical" information is revealed, the information that is known can be systematically organized and compared.

Case Number: _____

Counselor I.D.#: _____

LIFE FUNCTIONING INDEX

A. Vocational Scale

LFI1

1. Never competitively employed or not employed within the past 365 days; and not currently seeking employment
2. Not competitively employed but has held employment within the past 365 days; not currently seeking employment
3. Seeking sheltered employment
4. Unpaid worker: Homemaker, family worker
5. Vocational Preparation: VR client, student, on-the-job training
6. Seeking competitive employment
7. Sheltered employment
8. Business enterprise
9. Competitive employment

B. Educational Scale

LFI2

1. Sixth grade or less
2. Junior High graduate
3. High school or GED diploma
4. Technical Certificate or diploma
5. Associate of Arts degree
6. Bachelor degree
7. Post-graduate degree

C. Self-Care Scale

LFI3

- Cl. Self-Care Supervision: Requires verbal instructions, cues, information, or monitoring of
 1. Needs supervision for activities of daily living
 2. Needs no supervision for activities of daily living

C2. Self-Care: Assistance

LFI4 ☐

1. Receives assistance 17-24 hours per day
2. Receives assistance 9-16 hours per day
3. Receives assistance 5-8 hours per day
4. Receives assistance 3-4 hours per day
5. Receives assistance up to 2 hours per day
6. Receives no assistance

C3. Self-Care: Assistance

LFI5 ☐

1. Receives assistance 6-7 days per week
2. Receives assistance 4-5 days per week
3. Receives assistance 2-3 days per week
4. Receives assistance up to 1 day per week
5. Receives no assistance

D. Residential Scale

LFI6 ☐

1. State or private institution (e.g., acute rehabilitation hospital, psychiatric hospital)
2. Skilled care facility (i.e., facility maintains a specified ratio of specialized nurses/professional to clients)
3. Intermediate care facility (e.g., facility with skilled nurses offering less intensive care than (2), rehabilitation services available)
4. Long-term group living facility (e.g., hospice, hostel, congregate housing facility, college dorm, special school for visual and/or hearing impaired or parent/guardian home)
5. Transitional living placement (e.g., halfway house, community mental health center)
6. Own residence with a part-time or live-in attendant
7. Own residence with no live-in attendant

E. Mobility Scale

LFI7

1. No mobility
2. Access limited to single room or dwelling
3. Access limited to neighborhood or community
4. Access outside community

F. Communication Scale

1. Expressive Communication

LFI8

1. Substantial impairment in expressive communication
2. Moderate impairment in expressive communication
3. Minor impairment in expressive communication
4. No impairment in expressive communication

2. Receptive Communication

LFI9

1. Substantial impairment in receptive communication
2. Moderate impairment in receptive communication
3. Minor impairment in receptive communication
4. No impairment in receptive communication

LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)

(s)

LFAS was developed by The Institute for Rehabilitation Research, Behavioral Ecology Program, Houston, Texas, copyrighted in 1981.

LFAS will provide continual measurements of actual activity over time.

ON

LFAS has four components:

- . The Self-Observation and Report Technique (SORT) is the primary data collection method used to gather information about the daily activities of selected target individuals. The SORT is an interview technique that can be used in a variety of data collection modes. The interview can be conducted by the interviewer via the telephone or face-to-face with the client. In essence, the SORT interview is a technique to quantify a person's daily activities during a certain period of time, usually 24 hours. The interviewer records the client's reported sequence of behaviors. To help clients reconstruct their activities, the interviewer must be able to provide prompts to stimulate and enhance the clients' recall. As the activities are reported, the interviewer translates the activities into units of behavior. When completed, the interview produces a quantitative record of what the person did, when, with whom, where, and some information on how the activities were carried out.

There are two mechanical or electro-mechanical devices employed in the LFAS to provide measurements of specific behavioral parameters. The wheelchair odometer is a small, unobtrusive mechanical counter. When attached to the wheels of a wheelchair, periodic readings of the counter produce a measure of the linear distance traversed during a period of time. The number of feet traversed during a week, for example, is an excellent measure of mobility. The RTM/STM is a small device which records elapsed time electrically. When connected to pressure sensitive pads and placed beneath either the mattress of a bed or a wheelchair cushion, the RTM/STM device

provides a measure of time out of bed (Rest Time Monitor - RTM) or time sitting in a wheelchair (Sit Time Monitor - STM).

3. The Environmental Negotiability Survey (ENS) provides a sensitive, objective, quantitative approach to assessing living environments for the physically disabled. The data produced by the ENS can be used to counsel clients on home modifications on a cost-benefit basis.
4. The Longitudinal Data Management System (LDMS) is a package of computer programs designed to greatly facilitate management and analysis of LFAS data. Although designed to support the data produced by extensive use of the SORT, the LDMS is very flexible and can be applied to many data management problems.

The focus of the system is on the patient's performance under everyday circumstances, both within the hospital and following discharge. Measurements of the patient's performance are made and include the location, time, assistance from others, sociability, diversity and number of specific behaviors, and rate of change in these behaviors over time. The LFAS is focused on measures of actual client behavior.

USE

The LFAS has been developed, tested, and refined in the context of comprehensive rehabilitation for spinal cord injuries, and thus is most appropriate when used in similar contexts. However, the SORT and supporting computer-based data management system is very flexible and can be used for many purposes with many different populations in both institutional or hospital settings as well as with clients at home or in the community.

The LFAS should be useful to various rehabilitation professionals (e.g., case managers, program managers, physicians, occupational and physical therapists, social workers, and others). Case managers may find it useful in determining eligibility, developing rehabilitation plans, and assessing client progress. Program managers may find it useful in documenting the impact of their programs. In addition, the LFAS should be useful for a number of research and program evaluation purposes.

The LFAS is designed for individual assessment over long periods of time (up to years). However, the LFAS can be used to reflect the functioning of systems (wards or units, programs, services, etc.). The LFAS is most powerful when employed to provide measures of

patient/client outcome. That is, the LFAS provides measures of dependent or criteria variables.

ADMINISTRATION

The LFAS measurement tools can be used by rehabilitation team members (nurses, therapists, case managers, etc.), by professional performance monitors, or by researchers. The time required for use varies with the extensiveness of application. Generally, less than two person hours per patient interview are required to collect, process, and interpret the data from the SORT.

SCORING

There is no scoring in the traditional sense associated with the questionnaire instruments. Each measurement tool in the LFAS System (SORT, Odometer, RTM/STM, ENS) produces data that can be easily hand tallied to reveal pertinent indicators.

1. SORT. For use with spinal cord injured populations, key indicators of status and progress can be tallied directly from the interviews. When the SORT is employed with the LDMS, a wide array of behavior status indicators can be developed. The programs include the capability of developing norms for any set of indicators for any population.
2. Odometer. The cumulative counter is read periodically (e.g., daily, weekly). The counts on the counter represent wheel revolutions. A simple conversion translates counts into linear distance (e.g., feet, meters). The measure of mobility is the distance traversed per time period (days, weeks).
3. RTM/STM. The measurements produced of hours sitting or hours out of bed can be used directly for assessment of status and progress. It is useful to average daily data into weekly means.
4. ENS. Scoring of the ENS involves little more than calculating percentages. The data produced can be used directly for assessments of living arrangements or for counseling for environmental modification.

RELIABILITY

There are high levels of reliability and accuracy for each of the LFAS components (see references).

VALIDITY

The LFAS has documented validity in the following areas: There are no inferred underlying constructs; face validity is high. The key indicators of functioning for spinal cord injury are internally consistent. The measures of client status are useful to clinical teams conducting programs of comprehensive rehabilitation. The key indicators of functioning for spinal cord injuries have extremely high predictive validity.

ADVANTAGES

Some of the advantages include the following:

1. LFAS can be used to provide relatively continuous monitoring rather than periodic assessment;
2. LFAS is based on observable patient behavior as it occurs, rather than global estimates, retrospective judgment, or professional opinion;
3. the indicators of client functioning are objective and quantified;
4. the LFAS will reveal outcomes or results that were not anticipated or were unexpected;
5. the orientation of the LFAS is to monitor directly whatever clients do in their everyday routine and then translate this actual behavior into quantitative assessment of performance rather than basing it on prior pre-selected categories of behavior.

LIMITATIONS

Some of the limitations include the following:

1. The LFAS is designed for longitudinal application. Although it can be used in a point-in-time fashion, it has limited application as an initial status evaluation or screening device.
2. The primary data collection tool (the SORT) requires use with clients of average intelligence and verbal communication skills.

3. The ENS requires a home visit with the client present.
4. The rationale and techniques of the LFAS are unconventional. Although simple and easy to understand, most rehabilitation professionals are unfamiliar with this approach.

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Alexander, J.L. Behavioral monitoring following traumatic spinal cord injury. Presented at Symposium: "Longitudinal Adjustment to Disability", 89th Annual Convention, American Psychological Association, Los Angeles, California, August 27, 1981.

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AVAILABILITY

Materials and additional information can be obtained by
contacting the appropriate office at:

The Institute for Rehabilitation
and Research (TIRR)
Division of Education
Materials Development Program
1333 Moursund Avenue
Houston, TX 77030

A training package for the SORT is available through the
Division of Education, TIRR. For some purposes,
additional technical assistance may be required.

The LDMS computer package is available through the
Division of Education, TIRR. Technical assistance for
installation and initial familiarization with the programs
may be required.

The training package for the ENS is being developed and
should be available soon through the Division of
Education, TIRR.

The wheelchair odometer and RTM/STM instruments can be obtained from the Rehabilitation Engineering Center, TIRR. Contact either Dr. L.S. Halstead or Dr. T.A. Krouskop at TIRR.

Additional information of inquiries should be directed to Dr. J.L. Alexander, Behavioral Ecology (G-238), TIRR.

CASE SUMMARY
LONGITUDINAL FUNCTIONAL ASSESSMENT SYSTEM (LFAS)

The data obtained with the Longitudinal Functional Assessment System can provide valuable information for clinical use. For example, we have presented information at weekly rounds during hospitalization and have monitored the functional status of the clients after discharge. The applications to be illustrated are based on SORT data from the case histories of two clients, Dan and Al.

Dan suffered a spinal cord injury at the age of 23 when he dove into a swimming pool. He was placed in tongs to stabilize his head and was admitted for a full rehabilitation treatment program. He was diagnosed as quadriplegic at the C5-6 level. Dan is a friendly, outgoing person. He had graduated from college and was employed as a computer programmer at the time of his injury.

One of the variables reported at the weekly medical team rounds was Dan's rate of independence. This measure was obtained by dividing the number of activities which he did without any assistance by the number of his active behaviors. During his second week, a special device was designed to enable Dan to drink water independently, but it broke the following week. Consequently, his independence level dropped slightly between his second and third weeks of hospitalization. This drop is shown in Figure 1. This illustrates the sensitivity of the SORT to such changes in the client's repertoire.

Dan remained at a low level of independence through week eight. Beginning at week nine, a major increase in his level of independence occurred. It can be seen that in one week, he went from four percent of activities performed independently to twenty-four percent. This rise coincided with Dan's telling both his family and the staff to let him do things himself. In his last two weeks, his independence level dropped slightly. This decrease in independence near the time of discharge has been observed in many clients and may be due to changes in daily schedules or clients' anxieties about going home.

In order to put Dan's information in perspective, the equivalent curve for Al is presented in Figure 1. Like Dan, Al received an injury at the C5-6 level in a diving accident and he too was placed in tongs. He was 19 years old at the time of his injury. In contrast to Dan, Al is a quiet, rather passive person who had quit school in the 8th grade and had worked at various construction jobs. Al's level of independence varied considerably from week to week. During week four, he used a

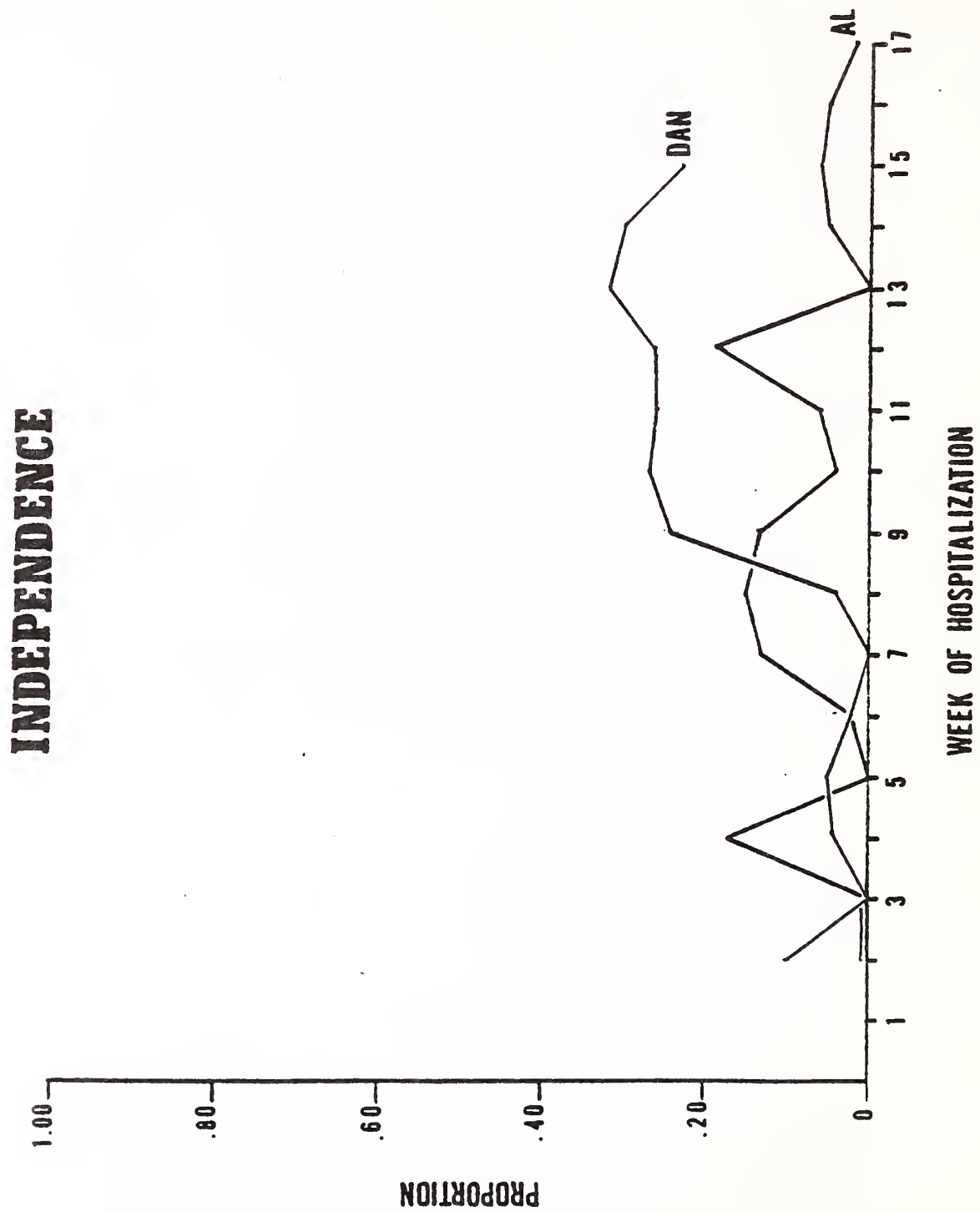


FIGURE 1

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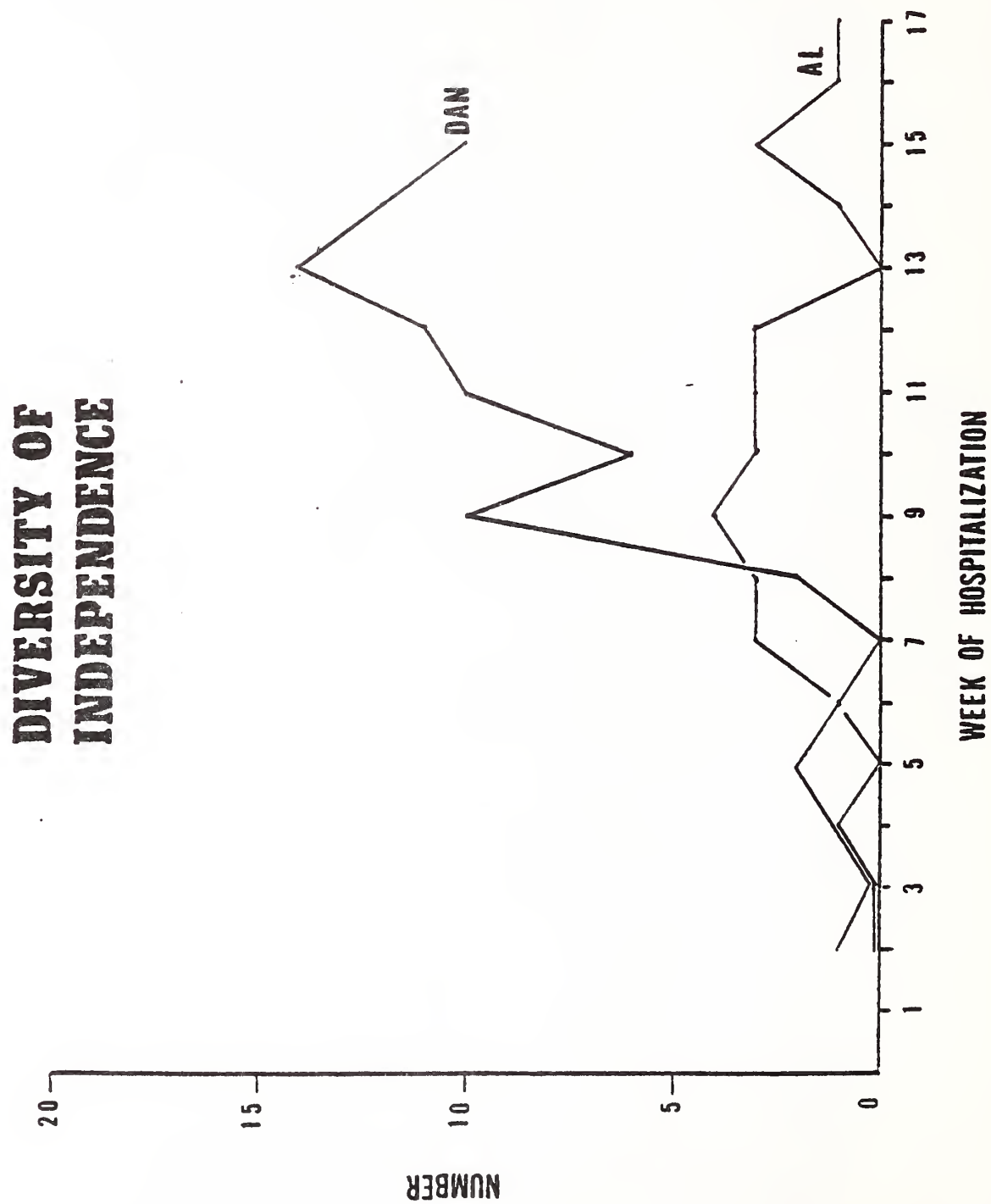
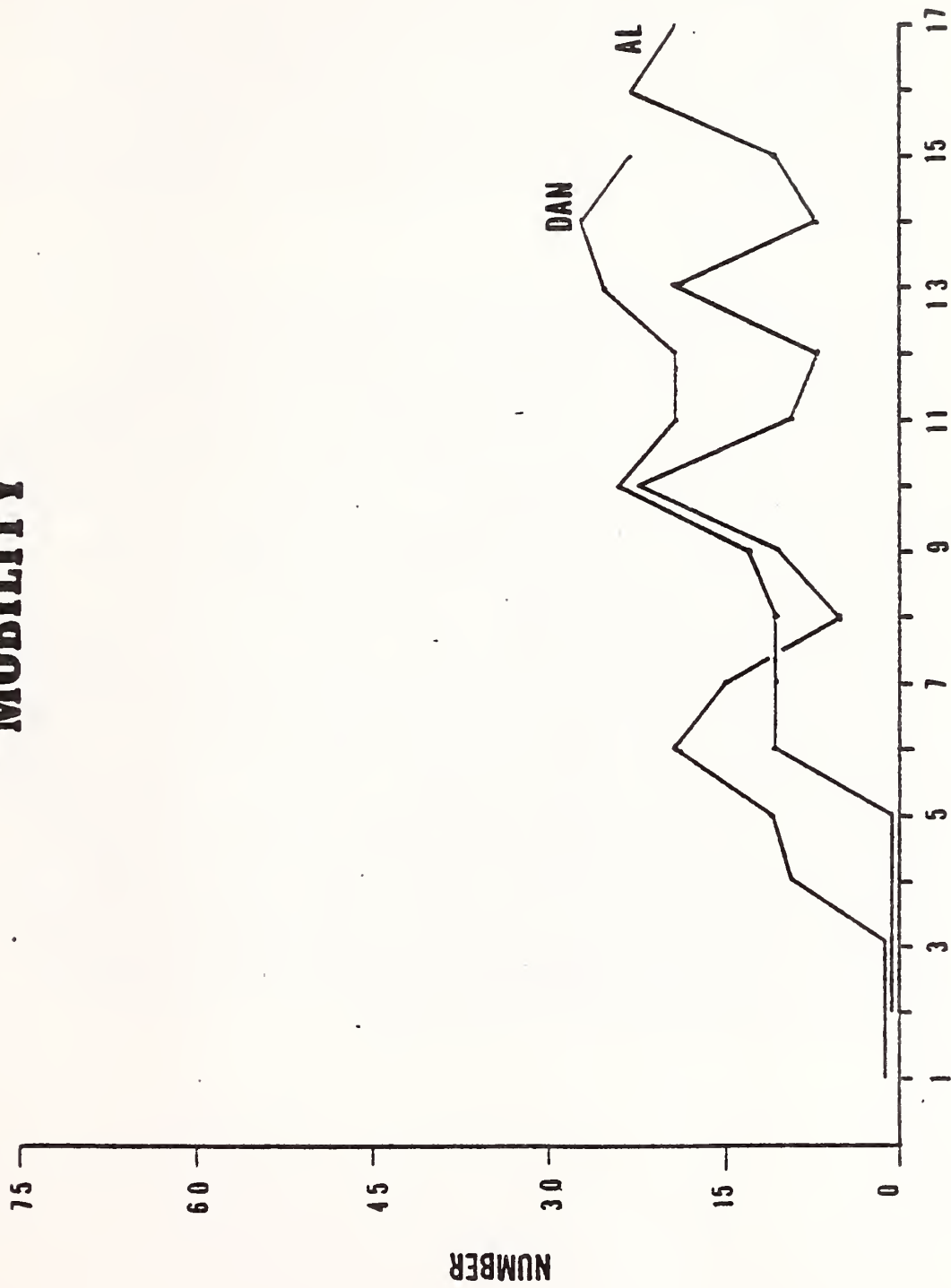


FIGURE 2

MOBILITY



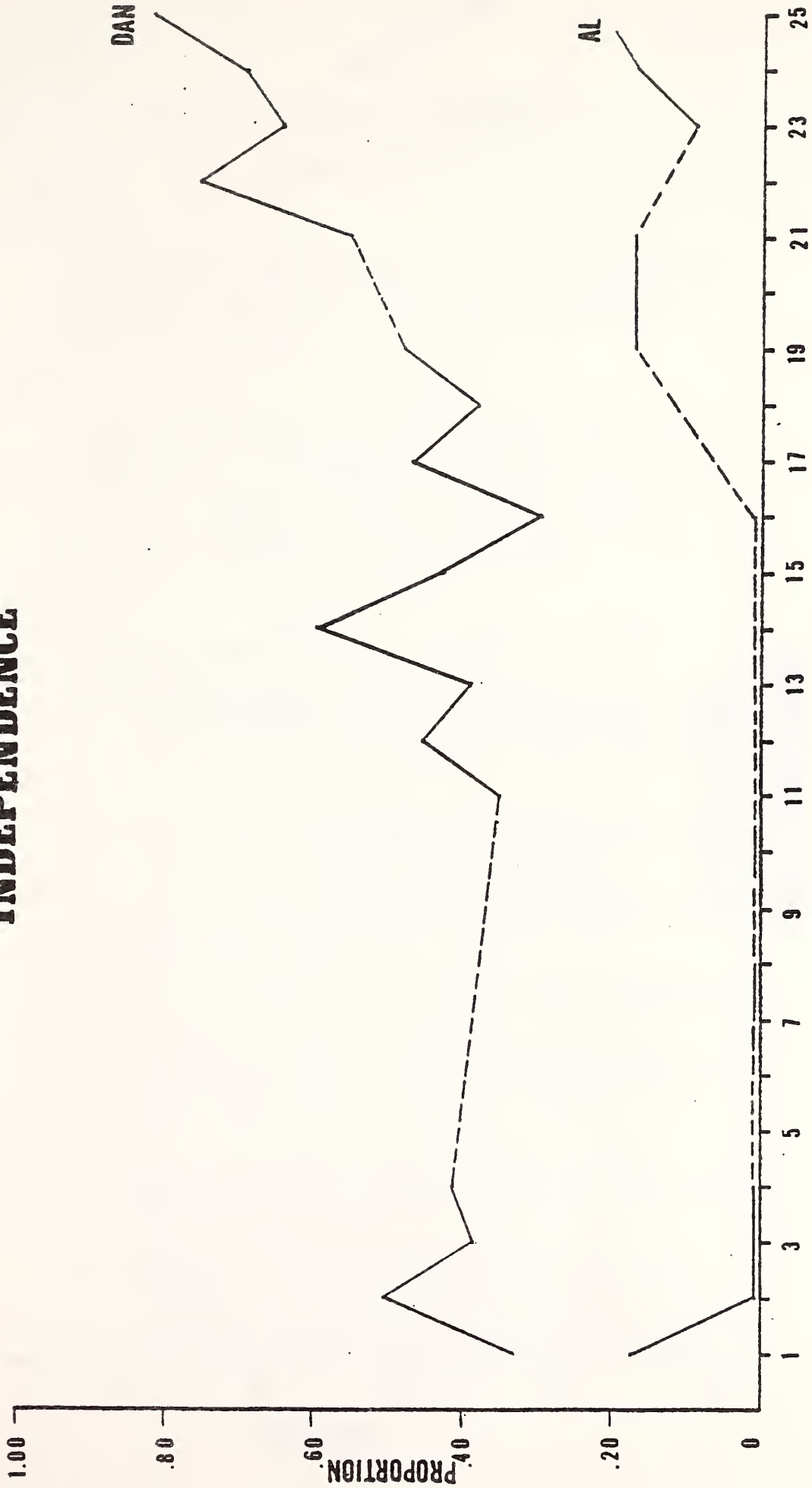
WEEK OF HOSPITALIZATION

FIGURE 3

One important measure obtained after discharge is the proportion of activities performed outside the home. This provides an index of a person's involvement in the community. As can be seen in Figure 5, Dan had a generally increasing involvement outside his home with considerable monthly variation. He spent a great deal of time at work and visiting friends. The decrease in activities outside the home in the twelfth month represented a period when Dan was ill and, therefore, stayed at home. Al, on the other hand, was virtually never out of his home and rarely out of bed. There was no ramp at the door so transporting outside was difficult. The increase in his out-of-home activities in the twenty-first month, reflected in Figure 5, was due to a visit to his brother's home.

These case studies illustrate that the LFAS can provide clinically useful indicators of clients' progress in rehabilitation both during the hospital stay and after discharge. Clients can benefit from these assessments in several ways. First, these indicators can serve as feedback to clients on progress in their functional abilities throughout the course of their rehabilitation. Second, SORT measures can alert rehabilitation professionals to changes in the status of a client which is information that can, in turn, be used in planning individualized treatments and programs for the clients. Any abrupt change in the functional status of a client might indicate a need for increased attention or immediate action by clinical staff. Third, the self-reports can be used to forecast future outcomes of clients. Those clients who have a high risk of poor postdischarge adjustment can be identified before discharge, and appropriate interventions can be made to improve their chance of success. Fourth, comparison of an individual's status with the average value for his or her reference group can also aid treatment planning. Fifth, comparisons between groups provide average values for disabled and able-bodied persons which may provide guidelines in developing goals for rehabilitation programs. In conclusion, the SORT, used alone or in conjunction with other components of the Longitudinal Functional Assessment System, provides a valuable methodology which can be used for many purposes and with many kinds of people.

INDEPENDENCE



MONTHS POST-DISCHARGE

FIGURE 4

OUT-OF-HOME ACTIVITIES

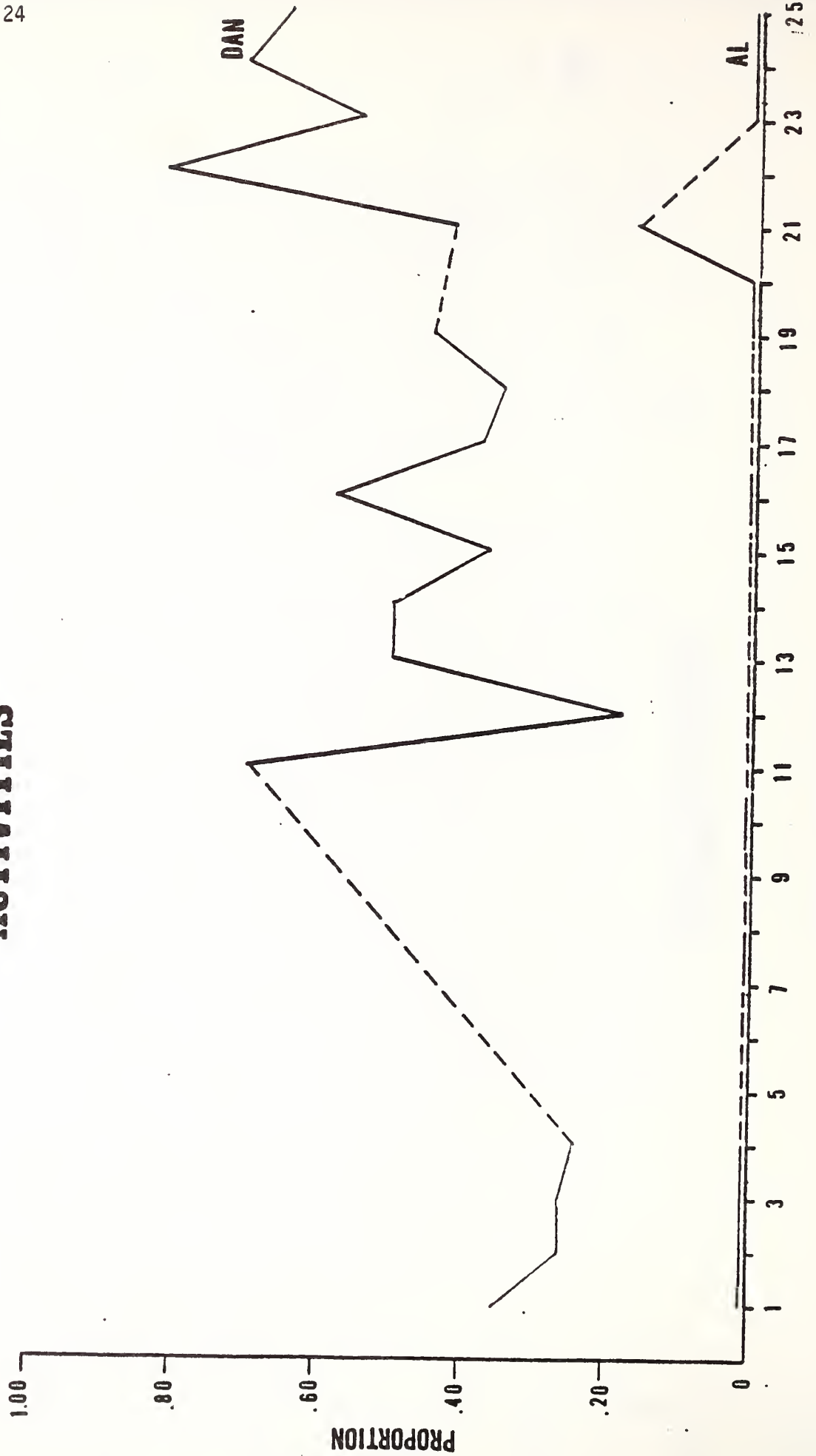


FIGURE 5

PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDO)

DEVELOPER(s)

The PDO was developed by Joseph B. Moriarty at the West Virginia Research and Training Center, and copyrighted in 1981. Use is restricted to professionals trained and certified in the PDO.

PURPOSE

The PDO is designed to provide structure to the diagnostic process in that it provides a quick assessment of client employability (functional limitations and client change) across five factors: physical condition; mental condition; emotional condition; attitude and motivation; and social, economic and personal condition.

DESCRIPTION

The PDO is comprised of nine subscales.

1. The Work Information subscale has 17 items in a right-or-wrong format and it is designed to assess the client's general knowledge of the world of work.
2. The Preliminary Estimate of Learning (PEL) has 30 items in a right-or-wrong format and it is used to assess general knowledge associated with intelligence. If recent IQ scores are available, they can be converted to stanine scores and this section omitted.
3. The Psychomotor Skills section has nine items and assesses the level of gross and fine motor skills.
4. The Reading Ability and Comprehension subscale is an 18-item orally administered instrument in a right-or-wrong format.
5. The Work Importance subscale is a 10-item four-point Likert scale that assesses the client's attitude toward work.
6. The Personal Independence section is a 29-item measure of client's self-reported physical independence. Items are rated on a four-point scale as follows: "0" cannot do it; "1" requires assistance from another person; "2" uses device; and "3" does it him/herself.

7. The Internality subscale is a 15-item four-point Likert scale assessing the degree of externality or internality possessed by the client.
8. The Emotional Functioning subscale is a 22-item self-report instrument designed to identify general psychological pathology, using questions relating to depression, withdrawal, aggression, anxiety, and contact with reality.
9. The Demographic Information section considers six demographic items (age, sex, employment status, marital status, educational level, disability) which are coded and scored, providing a rough preliminary estimate of chances for competitive employment, as compared to a VR population similar to the specific client.

USE

The PDO is designed for all clients able to give informed consent. It is appropriate for use in the state-federal rehabilitation program, sheltered workshops, rehabilitation facilities, and other settings involved with the rehabilitation of the handicapped.

The PDO may be useful to counselors in the following ways:

1. PDO is a functional assessment tool and may be useful in measuring the extent of handicap (i.e., how the disability limits the individual's functioning).
2. Using PDO, counselors will be able to formulate more pointed evaluation questions, which should result in more precise, concrete, useful evaluations.
3. PDO is useful in setting goals and planning services; thus it is useful in preparing Individualized Written Rehabilitation Programs (IWRPs).
4. Repeated measures of the PDO provide some indication of the impact of rehabilitation services, and document client gains beyond vocational status.
5. Results of repeated measures can be shared with clients to underscore the progress already made and to encourage them to continue.

6. Evaluating the impact of services can help the counselor evaluate the relative superiority of different providers of the same service.

Program managers should find it useful in documenting program movement toward compliance with Congressional intent (i.e., severely disabled must be served first); enabling VR to gather pertinent information about characteristics of the population it serves; providing an indication of the organization's effectiveness and efficiency in that it documents counselors' attention and time devoted to various clients on the basis of functional disability with respect to cost per case, cost benefit return, and production of closure.

ADMINISTRATION

The PDO is designed to be used in a structured interview and relies on self-report and demonstration of performance through structured tasks. It can be administered at different times throughout the program. Use is limited to rehabilitation professionals trained in PDO use. Training for the administration and interpretation of the PDO is facilitated by the use of seven modules developed by the West Virginia Rehabilitation Research and Training Center. The PDO can be administered in less than an hour.

SCORING

Total raw scores are calculated for each of the eight subscales (Demographic Information not included) of the PDO. This is accomplished by summing the ratings of each subscale and transferring those scores to a stanined profile which provides a visual display of the client's functioning over several areas.

RELIABILITY

Three distinct validation samples were used in the development of the PDO. The College Sample (N=58) consisted of West Virginia University students selected to provide an assessment of the soundness of the analytic framework supporting PDO. The West Virginia Sample (N=151) consisted of clients from the West Virginia Rehabilitation Center at Institute, West Virginia. This center serves multiply-handicapped clients and its caseload typically carries a higher percentage of mentally retarded than would the average field caseload. The National Sample (N=292) consisted of clients who were administered the PDO by vocational rehabilitation professionals participating in the PDO Level I training.

Reliability data were gathered at the subscale level. Highlights are summarized below.

The temporal stability of five of the subscales (i.e., Work Information, PEL, Reading Retention, Internality, and Emotional Functioning) was assessed by retesting a group of clients in the West Virginia sample 30 days after the first administration (N ranged from 26 to 28). Stability correlation coefficients for these subscales ranged from .66 to .97.

The internal consistency of each subscale (except Personal Independence) was determined by calculating item-to-total correlations on the national sample. Across the seven subscales, the highest correlation of an item to its subscale score was .69, with .26 as the lowest. Additional internal consistency data include the following: Internal consistency coefficients (KR-20) calculated on the West Virginia sample for Work Information, PEL, Reading Retention, and Internality ranged from .72 to .97. The average item-to-total correlation on the West Virginia sample for Emotional Functioning was .54. Work Importance yielded a coefficient alpha of .85 on the college sample.

VALIDITY

Evidence for the validity of the PDO was gathered at the subscale level, using the validation samples described in the Reliability section above. Highlights are summarized below.

Construct validity was examined on the Work Information and PEL sections by comparing the results with those of the Wechsler Adult Intelligence Scale (WAIS) Information subtest. It was reasoned that Work Information should be influenced by the ability of the individual to interact intelligently with his/her environment (as measured by the WAIS Information subtest) as well as by exposure to the world of work, and that the PEL acted in a similar fashion as the WAIS Information subtest, a brief general knowledge scale highly correlated with the WAIS full scale IQ. A correlation of .63 was found between Work Information and WAIS Information (N=43). The college sample yielded a correlation of .71 between the PEL section and WAIS Information. Further correlations between the PEL section and existing evidence of intelligence were calculated from the West Virginia sample: the PEL correlated .79 with WAIS Information (N=43); .71 with the WAIS full scale IQ (N=100); .74 with the Peabody General Information (N=50); and .78 with the Peabody Reading Comprehension (N=15).

Construct and discriminant validity were examined by looking at how different groups performed on the subscales:

The Psychomotor and Reading Retention sections were compared for the performance of the mentally retarded and non-mentally retarded. The ANOVA technique applied to a national sample confirmed the hypotheses that the mentally retarded would perform lower on both subscales than other clients. The F-value obtained for both subscales was statistically significant at the .0001 level. Similar results were found on a comparison of orthopedically and non-orthopedically impaired clients on the Personal Independence section with F-values significant at the .0005 level.

Comparisons of the mentally ill with the non-mentally ill on the Emotional Functioning section were significant at the .0001 level. Also, it was found that there is almost a full standard deviation separating the means on this subscale for the mentally ill and the orthopedically impaired. This lends additional support to the validity of this subscale.

Comparisons on the Internality subscale indicated that the college sample scored significantly higher than the West Virginia sample ($t=9.09$, $p < .001$). Results for the national sample fell between the college and West Virginia groups.

At this writing, replication of these studies is underway with a national sample of 1,000 clients. This replication includes a longitudinal study comparing PDO results at intake with the exit status of the client.

ADVANTAGES

Some advantages include the following: PDO provides a quick, graphic way of looking at multiple areas of functioning critical to employability in combination at the same time; it is relatively easy to use; no special tools, equipment or materials are used; and it can be completed by individuals having the skills usually possessed by rehabilitation counselors.

LIMITATIONS

The PDO assumes that the client has a minimal level of communication skills.

REFERENCES

Moriarty, J. Preliminary diagnostic questionnaire. Dunbar, WV: West Virginia Research and Training Center, 1981.

AVAILABILITY

Additional information can be obtained from:

PDO Coordinator
West Virginia Rehabilitation
Research and Training Center
One Dunbar Plaza, Suite E
Dunbar, WV 25064

The PDO is available for purchase only after training and certification.

CASE SUMMARY

PRELIMINARY DIAGNOSTIC QUESTIONNAIRE (PDO)

Demographic Information

Client J. Johnson is a 57 year old white male who has never been married and is currently unemployed. He earned a GED while serving in the military. His primary disability was reported as a back impairment caused by arthritis, however, in the course of the PDO interview, he admitted that his major disability may be a "nervous condition". Based on a study of 100,000 clients accepted for VR services, clients having the same demographic characteristics as Mr. Johnson (i.e., age, sex, marital status, education, disability and work status at acceptance) experienced a 68% probability of placement in competitive employment.

Client has worked for a total of 35 years, primarily as general laborer. His last jobs were at the Ace Medical Center where he worked for 15 years in the laundry earning \$7.49 per hour. He worked a second full time job for much of that time as a security guard at the Community Bank. He had been employed there for 9 years at a salary of \$2.89 per hour. He voluntarily retired from the laundry job because he felt the employer was forcing him out of his job. He is currently actively job hunting and recently lost his appeal for denial of unemployment benefits on the basis of prejudice and harassment on the job.

He lives alone in a rented apartment and has additional income of \$365 per month in VA disability benefits from an 18 year Army career which resulted in the arthritic condition, a ganglion of the right wrist and difficulty with his knees. Client's medication regime as prescribed by the VA Hospital includes Lanatuss, Acetaminophen, Diazepam, Naproxen, Furazepan, and Naprosyn. Based on client's former earnings, VA benefits do not appear to be a major disincentive to employment.

Client reports that his disability does not interfere at all with his working.

Profile Examination

This PDO profile offers a visual comparison of the client with a cross section of the VR population. Of the four cognitive areas, three (Work Information, PEL or an estimate of general intelligence, and Reading comprehension and retention) cluster above average at the 6th and 7th stanines. Psychomotor and Emotional Functioning are significantly lower at the 4th

stanine. Internality at the second stanine is the extreme low. There are no extreme highs.

Preliminary Estimate of Functioning									
9	17	26 - 30			39 - 40		52 - 60	75 - 80	9
8	16	24 - 25		18	37 - 38		49 - 51	74	8
7	15	~~20 - 23~~	9	~~17~~	35 - 36		45 - 48	71 - 73	7
6	~~13 - 14~~	18 - 19	8	15 - 16	33 - 34		43 - 44	68 - 70	6
5	11 - 12	15 - 17	7	12 - 14	~~31 - 32~~	~~87~~	41 - 42	64 - 67	5
4	8 - 10	10 - 14	~~6~~	7 - 11	29 - 30	85 - 86	38 - 40	~~60 - 63~~	4
3	5 - 7	5 - 9	4 - 5	1 - 6	27 - 28	81 - 84	35 - 37	54 - 59	3
2	2 - 4	2 - 4	0 - 3		23 - 26	75 - 80	~~30 - 34~~	43 - 53	2
1	0 - 1	0 - 1			10 - 22	0 - 74	0 - 29	0 - 42	1
Stanine	Work Information	PEL	Psychomotor	Reading	Work Importance	Personal Independence	Internality	Emotional	Stanine

Section and Item Analysis

Work Information

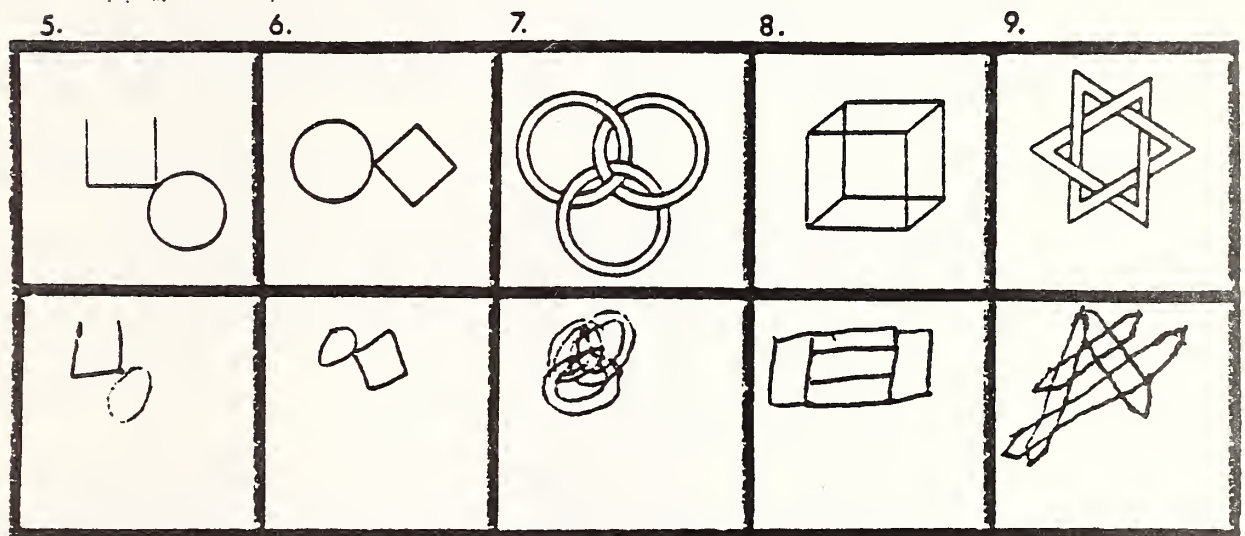
Client scored one stanine above average, getting 13 of 17 items correct. Questions missed concerned organized labor unions. This could be consistent with Army and non-union work, however, client talked about the strike of 1935, but did not know what a "wildcat" strike was. I felt there was some indication that the client does not really keep up with what is happening in his environment.

Preliminary Estimate of Learning

Client scored at the 7th stanine, getting 22 out of 30 items correct. His recall pattern was essentially consistent, although I would have expected someone with such a long service career to get the question about Soutnik right. Compares with WAIS IQ of 103 to 110.

Psychomotor

Envelope exercise was done correctly. Client added return address to envelope. Writing was legible, although tremor was significant. Client tried hard to do geometric drawings, although he was unable to complete last three. When asked to compare his work to samples, he was able to see that the last two were incorrect, but did not think he could reproduce them any more accurately. On number 7 with the overlapping circles, he did not see any problems with his reproduction. Again, significant tremor was noticed. Is this a side effect of his medication?



ENVELOPE

Johnson
anywhere else

Hills Department Store
227 Front Street
Albany, New York, 12208

X

Reading

In reading the story aloud, the client made no errors. When asked 18 questions about the story, he answered 17 correctly. He later recalled the one question he was unable to answer and supplied the correct response. He read well, with expression and observed the appropriate punctuation. This exercise suggests he has adequate reading skills and that he can read and recall at least at the ninth grade level.

Work Importance

Client expressed that he strongly disagreed with being satisfied with his life. He felt that his family and friends were behind him in his efforts to find work. He disagreed that his chances of getting a job were excellent but agreed that once he got a job, his chances of keeping it were excellent. He stated that his age and the local employment picture were the primary factors in his belief that securing a job would be difficult.

Personal Independence

Although client has arthritis he reports no difficulty with self care and mobility and was able to perform all demonstrations. There were no outward indications of pain or limitation during the exercise.

Internality

This was the lowest scored section. Client expressed strong agreement with the statements "When it comes to raises and promotions, it's not what you know (or do) but who you know", "People are born to be good at certain jobs and not good at others", and "There's no use in trying to get your own way at work". He did not express strong feelings of confidence in his ability to succeed in learning new skills or getting a good job. Perhaps because he perceives that he was forced out of his last job, he has a very negative feeling about the work environment. He reports that in his attempt to secure unemployment compensation, everyone including the referee was against him. He did not utilize the appropriate grievance procedures and does not appear to realize that this lack of action was of any consequence in determining outcome.

Emotional Functioning

Client's score at the 4th stanine is reflective of that of a VR mental health caseload, therefore individual item responses were studied. Client responded "often" to having feelings of anxiety and some aggression. He also responded "often" to seeing things other people don't see. When asked if

he had problems with drinking or drugs, he responded "often" to problems with alcohol.

Feedback Interview

Although the client has been on my caseload for some time, has completed a JOB Club program and is currently job hunting, I decided to use PDO to give me additional insight into the client and possibly indicate reasons why this client with a stable work history is now unable to function in a workplace.

Based on his Internality and Emotional Functioning scores, I see the need for more supportive counseling than originally planned. Most importantly, PDO brought out a problem area that had never been uncovered before. Although I had a gut level feeling about the client drinking, it had never been mentioned in existing records or revealed by the client in counseling, although I asked him several times if there was anything he wanted to discuss. We were able to discuss the hazards of drinking mixed with his medications and he explained his response to the Emotional item of bizarreness as alcohol related. Client felt that PDO scores in general, reflected his state of functioning. He was pleased that scores in Reading, PEL and Work Information were so strong.

Tentative Hypotheses

Client is not ready for immediate placement. Client has good work history and good cognitive skills as potential for reemployment. Mental health and substance abuse issues are current serious liabilities.

Plan of Action

1. Begin counseling toward recognition of alcohol problems.
2. As client admits problem, refer to AA and/or Mental Health Center for support and counseling.
3. Provide counseling support in realigning employer/employee relationships, as client is seeking employment in fields comparable to those in which he formerly worked.
4. After client is stabilized, intensive job search efforts as employment will be critical factor in long term recovery.

REHABILITATION INDICATORS (RIs)

DEVELOPER(s)

The Rehabilitation Indicators were developed by Leonard Diller, Wilbert Fordyce, Curand Jacobs, and Margaret Brown for the Rehabilitation Indicators Project at the New York University Medical Center. Copyrighted materials were first published in 1974.

PURPOSE

RIs are used to describe diverse aspects of client functioning.

DESCRIPTION

RIs consist of three assessment instruments (i.e., Status Indicators, Activity Pattern Indicators, and Skill Indicators) which are designed to capture characteristics and information about client functioning across broad areas of functioning from three points of view. Each of the three instruments can be used individually or in combination with the others. The RIs are descriptive statements presented in "non-jargon" language and they refer to specific, observable aspects of behavior. Each descriptor may act as an indicator of rehabilitation progress, depending on the individual or group assessed and on the rehabilitation setting in which the assessment occurs. As indicated below, the three sets of descriptors differ in the aspects of functioning investigated and in approaches to data gathering:

1. Status Indicators consist of 51 descriptors in six areas of functioning: vocation, income, education, self-care (including housing arrangements and assistance provided), transportation, and family role. Status Indicators may look like "demographics", but they include only those variables that can be influenced by disability and by rehabilitation efforts. Status Indicators are recorded by interviewing the client or significant other, by investigating already existing records, or through the client's written self-report.
2. Activity Pattern Indicators (APIs) are a family of instruments that are designed to describe an individual's patterns of daily activity: types of activities engaged in, location, use of assistance, and level of concurrent social contact. Two basic approaches to gathering such data have been

developed: (a) An Inventory of activities, in which a standard list is used to review the nature of activities engaged in during a specified time sample (e.g., "last week", unless atypical for the person). The Inventory is administered through an activity diary or through a self-administered questionnaire, followed by an interview to clarify responses and to gather additional behavioral information. (b) A Timeline format is also available in which, through interview or diary, an individual reconstitutes two recent typical days. Data-gathering time with either format varies with the number of optional activity dimensions being coded and the complexity of the individual's pattern of activity; typically claims on the data gatherer's time vary from five minutes (with a Self-Administered Inventory) to 50 to 60 minutes (with a Timeline interview in which the informant has not kept a diary and where all optional activity dimensions are coded).

3. Skill Indicators contain several hundred specific skills which provide a description of the "behavior tools" a person has or has problems with in meeting his/her vocational, education, recreational, family role, self-care, and other goals. The skills are organized into more than 70 skill packets. It is important to note that users preselect for assessment only those packets relevant to their target audience and only the relevant skills within each packet. Skill Indicators are recorded in a problem list format by observing and interviewing the client or significant other.

USE

RIs focus largely on functioning per se, not on impaired functioning or functioning that compensates for an impairment (e.g., using sign language). Therefore, RI descriptors can be used with clients with any type of disability (e.g., physical, sensory, psychiatric, and/or developmental). The developers of RIs recommend their use in nearly all rehabilitation settings (e.g., state-federal VR, rehabilitation facilities, medical rehabilitation, independent living centers, etc.) as well as non-rehabilitation settings (e.g., mental health centers and hospitals).

RI descriptors are designed to be used by a number of rehabilitation professionals (e.g., program managers, nurses, psychologists, physicians, aides, occupational therapists, etc.). Using RI descriptors, program managers will be able to document client change, thereby enhancing

the face validity of evaluation data; better monitor and supervise counselors; and identify the usefulness of specific inputs in contributing to client outcomes among specific client groups. The generic language of the descriptors will aid case managers in determining eligibility, identifying client needs, specifying goals, communicating with clients and facilities, measuring multidimensional outcomes and assessing goal attainment. Another feature of the RIs flexibility is the convenience of using only those forms and items selected as appropriate to the individual client and/or specific program. In addition, the use of the RI descriptors should prove helpful in facilitating inter-setting and inter-professional communication and in providing information for program evaluators, researchers, and policymakers.

ADMINISTRATION

RI data can be ascertained in a variety of ways (e.g., professional or paraprofessional observation, self-report via interview and/or self-administered questionnaires, interviews with the client's significant other(s), or relevant rehabilitation personnel). RI data can be obtained at any point in the rehabilitation process, or subsequent to it. Training manuals are designed to aid rehabilitation settings in judging how best to gather RI data to meet the needs of the particular setting.

SCORING

Status Indicators generate categorical descriptive data. Scores can be generated by users if desired, as described in the Status Indicators training manual.

Activity Pattern Indicators scoring depends upon which data-gathering format is adopted and which dimensions of activity have been coded. Data reduction varies in terms of the measures adopted to describe the individual's level of participation. The Inventory generates two measures, frequency and diversity, while the Timeline generates an additional measure, duration of participation. Any of these measures can be used to describe what an individual does (i.e., type of activity engaged in), where an individual engages in the activity (i.e., home vs. away), use of assistance during activities and/or the presence of other people during activities. Thus, API data are descriptive of an individual's participation in home and community settings, mobility, sociability, and independence.

Skill Indicators are simply scored: A ratio for each skill packet incorporated into the assessment is generated

to indicate the number of skills viewed as being problems or as being null compared to the total number of skills in the packet. Scoring may be used to summarize the skill descriptors, but typically users place greater emphasis on individual skill change than on the summarized data.

RI descriptors are designed for individual assessment; data can be summarized for individuals or across individuals to provide group data.

RELIABILITY

Enhancing reliability of data gathering has been explored in a wide variety of contexts during field testing to determine training procedures to optimize such reliability. The results of these tests are quite encouraging (but highly detailed) and are described fully in Brown, Gordon and Diller (1983) and Diller et al. (1983), both available upon request.

VALIDITY

Validity has been explored by correlating RI data with disability information, demographics, psychological test scores, and other functional measures. Again, results are highly encouraging but lengthy; they are described fully in Brown et al. (1983) and Diller et al. (1983).

ADVANTAGES

RI descriptors provide the following advantages:

1. Their organizing characteristics and variety of uses make them flexible enough to be used in diverse settings.
2. They allow multidimensional and observable outcomes to replace unidimensional definitions of program success. Program evaluation can focus on an appropriately wide or narrow range of functioning to reflect fully the rehabilitation agency's areas of accountability--from "vocational only" to "independent living" to even more broadly focused areas.
3. Their structure and organization allow for ease of data reduction as appropriate; information can be obtained at relatively gross levels and/or at relatively specific levels with data collapsed to appropriate levels as program evaluation needs dictate.

provide a language of functional assessment broad applicability, with the potential for between various subsystems of rehabilitation , VR, Developmental Disabilities, Independent g, Medical Rehabilitation, etc.) and varying of participants (e.g., client-counselor, visor-counselor, etc.).

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sted in obtaining additional information on ontact:

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CASE SUMMARY REHABILITATION INDICATORS (RIs)

Because each of the RI assessment tools primarily provides descriptive information about the client, potential users of RIs have a choice of which of the tools they want to use--that single tool or combination which provides the type of data most useful to them. Thus, if the user (whether a counselor or a program administrator/evaluator) wants to assess major facts about the client's functioning, Status Indicators would be appropriate. If, on the other hand, the user wanted to know about the client's day-to-day life or skills, Activity Pattern Indicators or Skill Indicators, respectively, could be adopted. The point is that the potential user can adopt one or more of the RI tools, depending upon needs for information.

Examples of each of the RI tools is provided herein. The reader should remember, however, that because RIs are designed to be highly flexible, details of use will vary from user to user. So, for example, the Status Indicator materials show actual status at two points in time and status goals for a client; another user may have no interest in status goals, only in tracking progress; a third user may want status data at entry, closure, and two years post-closure, etc. Each of these options is possible with Status Indicators.

Status Indicators (SIs)

On the next two pages, the statuses of a client are shown at two points in time, approximately three years apart; also listed are status goals for the client during the initial assessment. On the left side of the page, statuses are listed in six areas: vocational, income, education, self-care, family role, and transportation.

Fourteen of the statuses were selected as advancement goals for this client; each is marked with an "A" in the last column. Entries in the last column marked with an "M" indicate a second type of goal--maintenance of the client's original status; "N" indicates that no goal has been set. In this example, of the 14 advancement (A) goals, nine had been achieved within the period of assessment. Of the 16 maintenance goals, all had been achieved during this three-year period.

These data can be useful to the counselor in initial phases of case planning and, by summing data across clients, can be useful to administrators in documenting caseloads and in evaluating benefits that accrue to clients.

STATUS INDICATORS

RE: RI ID# 500901 INITIALS P.B.

RUNDATE: 15MAR82

PAGE 1 OF 2

ASSESSMENT DATE:

3/5/79

3/10/82

3/5/79

WAVE (1)

WAVE (2)

GOALS:

VOCATIONAL STATUS

1A. EMPLOYMENT, PRIMARY TYPE	NONE	WAGE OR SALARY WORK	(A) WAGE OR SALARY WORK
B. EMPLOYMENT, SECONDARY TYPE	NONE	NONE	(N) NONE
2. DOT OCCUPATION CODE	UNKNOWN	UNKNOWN	(N) NO GOAL
3A. UNEEMPLOYMENT, PRIMARY TYPE	STUDENT, IN CLASSES	NONE	(A) NONE
B. UNEEMPLOYMENT, SECONDARY TYPE	NONE	NONE	(N) NONE
4. PRESENT EDUCATIONAL PROGRAM	TECH/VOC SCHOOL	NOT A STUDENT	(A) NOT A STUDENT
5. STATE-FEDERAL VR STATUS	YES	NONE	(A) NONE

INCOME STATUS

1. PERSONAL EARNED INCOME	NONE	14404	(A) 13000+
2. OTHER PERSONAL INCOME	NONE	NONE	(N) NO GOAL
3. FAMILY'S CONTRIBUTION	NONE	NONE	(N) NONE
4. FAMILY'S EARNED INCOME	15600	15600	(N) NO GOAL
5. OTHER FAMILY INCOME	YES, AMT UNKNOWN	YES, AMT UNKNOWN	(N) NO GOAL
6. PUBLIC RESOURCES	5328	NONE	(A) NONE
7. OTHER RESOURCES	NONE	NONE	(N) NO GOAL

EDUCATION STATUS

1. ACADEMIC ATTAINMENT	SOME COLLEGE	SOME COLLEGE	(A) BACHELOR'S DEGREE
2A. SPECIAL ED, PRIMARY TYPE	SPEC ED, PHYS DIS	SPEC ED, PHYS DIS	(N) NO GOAL
B. SPECIAL ED, SECONDARY TYPE	NONE	NONE	(N) NO GOAL
3. YEARS ENROLLED IN SPEC ED	8	8	(N) NO GOAL

SELF-CARE STATUS

1. TYPE OF HOUSING	APARTMENT	APARTMENT	(N) APARTMENT
2. NUMBER OF ROOMS	4	4	(N) NO GOAL
3A. OTHER PERSONS IN HOUSEHOLD	PARENTAL FAMILY	PARENTAL FAMILY	(A) FRIENDS
B. OTHER PERSONS IN HOUSEHOLD	NO OTHER PERSONS	NO OTHER PERSONS	(N) NO GOAL
4. NUMBER OF OTHERS IN HOUSEHOLD	3	2	(A) 1+

(CONTINUES ON PAGE 2)

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RE: RI ID# 500901, INITIALS P.B.

PAGE 2 OF 2

ASSESSMENT DATE:	3/5/79	3/10/82	3/5/79
	WAVE (1)	WAVE (2)	GOALS:
SELF-CARE STATUS (CONTINUED)			
5. HIRED ASSISTANCE, HRS./MO.			
A. NURSE	NONE	NONE	(N) NO GOAL
B. ATTENDANT	NONE	NONE	(M) NONE
C. CHORE SERVICES	NONE	NONE	(M) NONE
D. INTERPRETER	NONE	NONE	(N) NO GOAL
E. READER	NONE	NONE	(N) NO GOAL
F. COMPANION	NONE	NONE	(N) NO GOAL
G. OTHER HIRED ASSISTANT	NONE	NONE	(M) NONE
6. VOLUNTEER ASSISTANCE, HRS./MO.			
A. FAMILY MEMBERS	NONE	NONE	(M) NONE
B. FRIENDS	NONE	NONE	(M) NONE
C. OTHER VOLUNTEERS	NONE	NONE	(M) NONE
7. USE OF ASSISTIVE DEVICES			
A. MODIFICATIONS AT WORK	USES SOME	USES SOME	(M) USES SOME
B. MOBILITY AIDS	USES SOME	USES SOME	(M) USES SOME
C. ADL AIDS	USES SOME	USES SOME	(M) USES SOME
D. VISION AIDS	USES SOME	USES SOME	(M) USES SOME
E. COMMUNICATION AIDS	HAS NONE	HAS NONE	(N) NO GOAL
F. OTHER AIDS	USES SOME	USES SOME	(M) USES SOME
FAMILY ROLE STATUS			
1. MARITAL STATUS	NEVER MARRIED	NEVER MARRIED	(N) NO GOAL
2A. CHILDREN, TOTAL	NONE	NONE	(N) NO GOAL
B. CHILDREN IN HOUSEHOLD	NONE	NONE	(N) NO GOAL
TRANSPORTATION STATUS			
1A. USE OF TAXI SERVICE	USED FREQUENTLY	USED OCCASIONALLY	(A) USED OCCASION
B. USE OF TRANSPORT FOR DISABLED	NOT USED, AVAILABLE	USED FREQUENTLY	(A) USED FREQUENT
C. USE OF BUS SERVICE	NOT USED, AVAILABLE	NOT USED, AVAILABLE	(A) USED OCCASION
D. USE OF TRAIN/SUBWAY	NOT USED, AVAILABLE	NOT USED, AVAILABLE	(N) NO GOAL
2. DRIVER'S LICENSE STATUS	NO LICENSE OR PERMIT	NO LICENSE OR PERMIT	(A) RESTRICTED LI
3. ACCESS TO VEHICLE	HAS; MODIF UNNEEDED	HAS; MODIF UNNEEDED	(M) HAS; MODIF UN
4. VEHICLE DRIVING STATUS	IS ALWAYS DRIVEN	IS ALWAYS DRIVEN	(A) USUALLY DRIVE

GOALS ACHIEVED

A: 9/14

M: 16/16

Activity Pattern Indicators (APIs)

APIs are of relevance whenever potential users are interested in issues of what is happening in the client's day-to-day life. For example, a job placement specialist might ask a client to tally in an API diary the activities (s)he engages in during the week and then use these data to set behavioral goals regarding better time use by the client in the job-seeking process. In a second example, a program may wish to document and justify homemaker closures by showing that services do lead to a client's resumption of this type of activity in his/her home. Although the examples of uses we could provide have great variety, adoption of APIs, in sum, is appropriate for those interested in documenting any client's actual functioning or gains in functioning within the following (and similar) dimensions:

- * Independence/dependence
- * Mobility
- * Social involvement
- * Active vs. passive time use
- * School/work hours
- * Assistance received

In the example on the next two pages, a type of API data for a client is displayed. Here we see indicators of time use, assessed at two points in time, with a listing of goals which were set after the first point of contact. This client, a former homemaker, when first applying for services indicated several presenting problems, including depression and a variety of physical and cognitive impairments associated with stroke. Attempting to see how these conditions affected the client's life, the counselor spotted several problem areas in this client's activity pattern: (1) no involvement in any remediation or training programs; (2) a large amount of time spent in "other inactivity", which includes napping and sitting idly; (3) a low involvement in the tasks of family life; (4) a reliance on passive recreation to fill time; (5) a low level of involvement in recreational activities outside the home (or, in fact, in any out-of-residence activity); (6) a low level of social contact; (7) over-reliance on physical assistance; (8) a lack of variety of activities engaged in; and (9) a slow tempo of daily life. In order to spot these problems, the counselor made use of RI project data "norms" and information the client revealed in her initial interview.

ACTIVITY PATTERN INDICATORS, TIMELINE FORMAT (V 0.3)
 SUMMARY DATA, RE: CLIENT# 932170 T. Q.
 RUN DATE: 19JUNE82

PAGE 1 OF 2

ASSESSMENT DATE:	6/15/81	6/9/82	6/15/81	6/9/82
	WAVE 1	WAVE 2	GOALS SET	GOAL ATTAINMENT

I. HOW THIS CLIENT SPENT HER/HIS
 TIME: PERCENT OF TIME SPENT
 IN CATEGORIES OF ACTIVITY

A TYPE OF ACTIVITY

1. Vocational	0.0	0.0	INC	NO
2. Educational	0.0	0.0	N	
3. Rehabilitation	0.0	10.0	INC	YES
4. Inactivity	42.0	30.0	DEC	YES
a. Sleep	32.0	30.0	N	
b. Other	10.0	0.0	DEC	YES
5. Personal care	8.0	7.0	N	
6. Family role	6.0	15.0	INC	YES
a. Housework	0.0	9.0	INC	YES
b. Household business	1.0	2.0	INC	YES
c. Child care	4.0	4.0	N	
d. Assisting adults	1.0	0.0	N	
7. Quiet Recreation	30.0	9.0	DEC	YES
a. TV	19.0	5.0	DEC	YES
b. Other	11.0	4.0	N	
8. Active recreation	5.0	8.0	INC	YES
9. Social interaction	8.0	15.0	INC	YES
a. Phone calls	2.0	2.0	INC	NO
b. Letters	0.0	0.0	N	
c. Socializing	6.0	13.0	INC	YES
10. Travel	1.0	6.0	INC	YES
11. Unknown	0.0	0.0		

B. LOCATION

1. Residence	93.0	80.0	DEC	YES
2. Away from residence	7.0	20.0		
3. Unknown	0.0	0.0		

SUMMARY DATA RE: CLIENT# 932170
RUN DATE: 19JUNE82

T. Q.

PAGE 2 OF 2

ASSESSMENT DATE: 6/15/81 6/9/82
WAVE 1 WAVE 2

6/15/81 6/9/82
GOALS GOAL
SET ATTAINMENT

C. SOCIAL CONTACT

1. None (not interacting)	43.0	43.0
2. Low	40.0	10.0
3. High	17.0	47.0
4. Unknown	0.0	0.0

N	
DEC	YES
INC	YES

D. ASSISTANCE

1. None (independent)	89.0	95.0
2. Supervision only	0.0	0.0
3. Supervision & phys. asst.	0.0	0.0
4. Minor phys. asst. only	5.0	2.0
5. Major phys. asst. only	6.0	3.0
6. Total phys. asst.	0.0	0.0
7. Unknown	0.0	0.0

INC	YES
N	
N	
DEC	YES
DEC	YES
N	

II. SUMMARY INDICATORS

NUMBER OF DIFFERENT ACTIVITIES (DIVERSITY)	20	31
---	----	----

INC	YES
-----	-----

FREQUENCY OF ACTIVITIES (TEMPO)	80	104
------------------------------------	----	-----

INC	YES
-----	-----

III. ATTAINMENT OF GOALS

20/22

The counselor used the initial data to discuss with the client how her impairments seemed to be affecting her life, presenting it as a pattern that is typical of many people who have had strokes. The client and counselor then set goals to indicate where decreases and increases would indicate progress toward the ultimate vocational goal. Once goals were set, a specific set of rehabilitation services were planned that were viewed as likely to move this client in the right direction. One year later, of the 22 goals set (i.e., increases or decreases of at least 10%), 20 had been achieved. The second year's pattern displayed much more activity variety, involvement in rehabilitation and outside activities, contact with people, independent activity, etc. Although the client had not yet achieved her vocational goals, she had made great progress in areas that would support the long-term goal.

API data are not only useful for counseling and for service planning, as is shown in this brief example, but also can be used to document goal attainment for purposes of program evaluation.

Skill Indicators (SKIs)

Skill Indicators constitute the most flexible assessment tool of any in the RI package. This flexibility leads to a great variety in how SKIs are used and in the types of examples we could present. We've selected one example based on a usage that rehabilitation counselors have tried out in one of our project's demonstrations.

On the next page, a set of skills is presented that a client filled out. On this sheet he indicated if he did each skill and, if so, if he had problems of any sort while doing them. The counselor had selected this particular skill set (and several others) after the initial intake interview and had asked the client to complete them at home and bring them back at the time of their next appointment. On the second sheet, the counselor has recorded the client's view in the first column, then has filled in the next three columns during the second interview. At this time she asked the client if he felt the skill was important in getting or holding a job (recorded in the second column). In the third column, the counselor indicated her impression of the client's skills, and in the fourth, indicated to a referral facility those specific skills that should be assessed. The fifth column has not been completed in that this counselor is only asking for an assessment at this time, not for training (or treatment). In the columns on the right, the facility has indicated its assessment of the client on the skills that had been requested by the counselor and also whether the facility's staff felt

SKILL INDICATORS

Name K. Bowen

Self-Administered Skill Assessment

Date May 27, 1982**1**CHECK ONE ANSWER
FOR EACH QUESTION**2**

THEN

I do this, without any problems or help	I do this, but with problems or with help	I don't do this	I don't know	This skill list is about: CHOOSING YOUR CLOTHES For each question, ask yourself: "Can I do this without any problems or without help from anyone?"	Check here if you've done this skill since the on- set of your disability.
✓				1. Do you wear clean clothes, both underwear and outerwear?	✓
✓				2. Do you wear clothes that are right for the weather?	✓
✓				3. Do you wear clothes that are unwrinkled and properly mended?	✓
	✓			4. Do you wear clothes that fit and that look nice on you?	✓
	✓			5. Do you choose colors that go well together?	✓
✓				6. Do you wear clothes that are right for what you are doing, whether work or play?	✓
✓				7. Do you wear clothes that are right for your sex?	✓

SKILL INDICATORS

Skill Packet Assessment

Initials/No. K.B. / A10041

INITIAL ASSESSMENT					SKILL PACKET	REFERRAL SERVICE FEEDBACK			FINAL ASSESSMENT				
CLIENT		COUNSELOR				Note: Please maintain backup documentation in your files.			CLIENT		COUNSELOR		
Date: 5-27	Date: 5-30	Does?	Job?	Treat?		Date: 6-20	Does?	Prognosis?	Treatment?	Date:	Does?	Imp?	
(Y/P/N)	(Y/N)	(Y/P/N)	(Y/N)	(Y/N)		(X/Y/P/N)	(+/?/-)	(X/+/+/0/-)		(Y/P/N)	(Y/N)	(Y/P/N)	(Y/N)
Y	N	Y	N		03.01 Selects clean clothing, e.g., outerwear and underwear								
Y	N	Y	N		03.02 Selects clothing appropriate to weather								
Y	N	Y	N		03.03 Selects clothing that is unwrinkled and mended								
P	N	P	Y		03.04 Selects clothing that fits and is a pleasing style	P	+						
P	N	P	Y		03.05 Selects clothing in which colors do not clash	P	+						
Y	Y	P	Y		03.06 Selects clothing appropriate for work, informal and formal conditions	P	+						
Y	Y	Y	N		03.07 Selects gender-appropriate clothing								
				Y	03. Other skills not mentioned above: 03.06a Selects clothing that is safe around machinery	P	+						

KEY "Does": Y = Yes, no problems P = Yes, with problems N = No, not at all KEY "Job," "Assess," "Treat": Job = Importance of skill in gaining or holding job Y = Yes N = No	COMMENTS: 	KEY "Does": X = Not assessed Y = Yes, no problems P = Yes, with problems N = No, not at all KEY "Prognosis": + = Good ? = Questionable - = Poor	"Treatment": X = Not treated + = No longer a problem - = Some improvement 0 = No change - = worsened	KEY "Does": Y = Yes, no problems P = Yes, with problems N = No, not at all KEY "Imp": Imp = Improvement Y = Yes N = No
--	--------------------------	---	--	---

this client could be successfully trained in each skill assessed. In the final columns, the facility, the client and the counselor will each be able to indicate his/her perception of skill gains achieved, if training is implemented.

Three points can be made about this example: (1) Skills of "Selecting Clothing" is only one packet of several that a counselor would be using at any one point in time. For example, the client may be asked to fill out skill assessment forms relevant to job seeking, social skills, self-care, etc. (2) The counselor may choose to use this form of assessment solely as a counseling tool (recording in only the first three columns) or solely as a way of monitoring skill changes (recording in the first three and last four columns) or solely as a referral form (using the fourth, fifth and middle three columns). (3) Again, these data, as are true of most RI data, lend themselves both to use by counselors in the process of planning and case management and to use by administrators who want to document client needs, benefits attained, and so on.

A SCALE OF EMPLOYABILITY FOR HANDICAPPED PERSONS (SE)

DEVELOPER(s)

SE was developed and refined from 1957-1963 at the Chicago Jewish Vocational Service (CJVS).

PURPOSE

The general purpose of SE is the evaluation of the employability (i.e., the ability to get and keep a job) of vocationally handicapped persons.

DESCRIPTION

SE consists of three separate behaviorally anchored scales, i.e., Counseling Scale (39 items), Psychology Scale (27 items), and Workshop Scale (48 items), which are designed to measure significant components of work behavior among handicapped individuals. Each scale contains a number of subscales which can be scored independently.

The Counseling Scale assesses language skills, dependency of client, effect of handicap upon client, marketability of client as related to his/her handicap, employment record or history, attitude and motivation, appearance and general impression, and marketability of client as related to placement. The Psychology Scale assesses functional level of ability, relationship to authority figures at work, relationship to peers, and effect of client's principal handicap upon employability. The Workshop Scale assesses ability to mobilize and direct energy in the work situation, capacity to tolerate and cope with pressures, tensions, and demands of the job, interpersonal relations with co-workers and foreman, and functional level of ability in the work situation.

USE

SE is appropriate for all clients who are vocationally handicapped as a result of emotional, physical, mental, and/or social disabilities. It is applicable in most rehabilitation service programs, especially vocational adjustment workshops.

The SE is useful to case managers, program managers, and researchers in a variety of social service, welfare, vocational guidance, and rehabilitation agencies. The instrument is designed to be used in the following situations: determining the feasibility of

rehabilitation, integrating diagnostic data, selecting vocational goals, evaluating services needed by the client, measuring vocational improvement, making comparative evaluations of alternative techniques of rehabilitation, and providing an evaluation of caseloads.

ADMINISTRATION

The administration of the SE requires professional judgment. The Workshop Scale is to be administered by the rehabilitation workshop foreman, the Counseling Scale by the vocational counselor, and the Psychology Scale by the psychologist after administering a battery of standardized tests. The scales can be administered whenever needed. For example, Counseling and Psychology Scales have been administered before the client enters the workshop, and the Workshop Scale has been administered after a two or three week diagnostic period, midway through the workshop program, and at its conclusion. The time required for a workshop supervisor, counselor, or psychologist to complete a scale for a client should be from 10-20 minutes.

SCORING

The scoring procedure for each of the three scales is the same. Total scale and subscale scores can be determined for each; however, it is not intended that the three total scale scores be combined into one SE score.

Each item is scored on a four-point scale, where a score of "1" means the client is clearly adequate, and "4" means the client is clearly inadequate for the particular trait or factor being measured. Scores of "2" or "3" mean the client is "borderline or better" or "borderline or worse", respectively. Ratings on tasks that have not been assigned to the client are omitted and do not influence the score. The raw scores are then weighted and summed and put into a formula to determine the total scale score. A "Table for Converting Raw Scores on the Workshop Scale to Final Scores" is provided and makes scoring even simpler.

The scoring procedure reflects the level of behavior at which a client is judged to be behaving, not just the adequacy of the client's behavior relative to other clients. A client who receives a high total scale score on one of the three scales would be judged as behaving at a very appropriate level overall on that scale, regardless of how well (s)he might be doing in particular areas of behavior (as measured by subscales). A client who receives a low total scale score, on the other hand, would be

judged as performing on a very inadequate level at the time of the rating.

RELIABILITY

Reliability data are available for the Workshop and Counseling Scales:

Workshop Scale

Internal consistency, examined through product moment intercorrelations of subsections to the total score, was generally high, ranging from .66 ($p < .01$) to .93 ($p < .01$). Subsection correlations with other subsections were lower, ranging from .29 ($p < .05$) to .72 ($p < .01$), indicating less homogeneity.

To determine interrater reliability, 50 clients were rated at the end of the fourth and fifth weeks of the program by different foremen. Product moment correlations ranged from .30 ($p < .05$) to .63 ($p < .01$). Some clients, however, were subject to a changed situation between ratings. This change and not the rater could cause lower correlations. Re-analysis, separating clients who had experienced significant changes in self or type of supervision between ratings from those whose situation had remained "stable", produced higher interrater correlations for those in a "stable" situation (.47, $p < .01$ to .73, $p < .01$) and lower correlations for the "changed" group (.10 to .54, $p < .01$).

A final measure of the reliability of the Workshop Scale involved test-retest by the same foremen with a four-week period separating the ratings. Reliability coefficients of .81 ($p < .01$) and .95 ($p < .01$) were yielded by the total scale. The individual subsections were more variable in this respect, with coefficients ranging widely between .59 ($p < .01$) and .81 ($p < .01$). Thus, it appears that a foreman's total score can be relied upon, whereas section scores are less dependable measures of employability.

Workshop and Counseling Scales Together

Correlations of each subsection of one scale with the total score of the other did not yield significant results on a small sample. However, it appeared promising that each scale, Workshop and Counseling, was independent and contributed something unique to client assessment.

VALIDITY

Evidence of validity is available for the Workshop and Counseling Scales:

Workshop Scale

Criteria for estimating the concurrent validity of the Workshop Scale include employability ratings, placement ratings, and staff decisions to continue or terminate the client's stay in the program. The employability and placement ratings were made by the entire staff at two different workshops during group conferences held at three predetermined times. The Workshop Scale was completed by individual foremen at the same three times. All correlations were significant at the .05 level, some at the .01 level.

The criteria used for estimating the Workshop Scale's validity as a predictor of employability include placement success, length of placement period, duration of first job, and duration of all jobs (i.e., percentage of time worked on all jobs after getting the first job). Follow ups at three, six and nine months were studied. The most prominent finding is the variability of the correlations. These range roughly between .03 (correlation of Workshop Scale scores with criteria from nine-month follow up) and .62 (correlation of Workshop Scale scores with criteria from six and three-month follow ups). Typically, correlations have values between .20 and .40, and a considerable number are significant at the .05 and .01 levels of confidence. It is clear that the Workshop Scale usually has a moderate degree of power in predicting employment outcomes. The data also suggested that placement success seems to be predicted somewhat more accurately than permanence of employment. It is concluded that the validity of the scale extends out at least over a six-month follow-up period and in instances over a nine-month period.

Counseling Scale

The correlation between total score and job placement was found to be .28 ($p < .05$). Though sample size was small, the scale did show promise as a prediction tool (but not for the minimally handicapped). The need for the refinement of some of the subscales was evident.

Workshop and Counseling Scales Together

The scales were combined through multiple regression. The correlation between the combined scores and getting a job was found to be .51. Though sample size was small, the combined form did show promise as a predictor.

ADVANTAGES

The major advantages are (1) the scales reflect behavior directly and can therefore be used by service personnel with varying degrees of experience; (2) the subscales for each scale, or alternatively the factors uncovered for the Final Report, provide profiles for individual strengths and weaknesses; (3) scores on the Workshop and Counseling Scales were reasonably good predictors of work potential; and (4) several research applications are possible.

LIMITATIONS

First, reliability scores were not sufficiently high to warrant full confidence, although minor modifications of the SE in other projects conducted by the Jewish Vocational Service had much higher reliability. The key lay in the degree of staff training and continuous monitoring. Second, it took longer to use than some other instruments with similar purposes. Third, the Psychology Scale was not fruitful in the applications tested.

REFERENCES

Bolton, B. Rehabilitation counseling research.
Baltimore: University Park Press, 1979.

Chicago Jewish Vocational Service. A scale of employability for handicapped persons, Final Report.
Chicago: Author, 1963.

Chicago Jewish Vocational Service. A scale of employability for handicapped persons, Third Progress Report. Menomonie, Wisconsin: Materials Development Center, University of Wisconsin-Stout, 1959.

AVAILABILITY

A Scale of Employability for Handicapped Persons, Third Progress Report, including the scale items and other pertinent information, is available from:

Materials Development Center
Stout Vocational Rehabilitation Institute
University of Wisconsin-Stout
Menomonie, WI 54751

An annotated bibliography on the scale and research projects using the scale can be obtained from:

Asher Soloff
Chicago Jewish Vocational Service
1 South Franklin Street
Chicago, IL 60606

VOCATIONAL BEHAVIOR CHECKLIST (VBC)
EXPERIMENTAL EDITION

DEVELOPER(s)

The VBC was developed by Richard T. Walls, Thomas Zane, and Thomas J. Werner at the West Virginia Rehabilitation Research and Training Center and copyrighted in 1978.

PURPOSE

The VBC provides a listing of objectives which can be used to describe each client's vocational competence, to prescribe curriculum to mediate deficiencies, and to evaluate progress.

DESCRIPTION

The VBC is an extensive list of 344 vocationally relevant skill objectives carefully specified in terms of conditions of performance, specific behaviors, and standards of performance. The objectives are classified and presented in seven categories as follows: prevocational skills, job-seeking skills, interview skills, job-related skills, union-financial-security skills, work performance skills, and on-the-job social skills. Optional data sheets are suggested as a way of monitoring daily programs of trainees.

USE

The VBC is designed to assess clients in vocational training and on-the-job training programs. It can be useful in the following settings: state-federal VR, sheltered workshops, educational facilities, and rehabilitation facilities.

The VBC is valuable to program managers, case managers, clients, and a host of other professionals in rehabilitation, education, and training. Case managers responsible for writing Individualized Written Rehabilitation Programs will find objective documentation for legislation requirements as well as a means of goal setting which is responsive to clients. The VBC defines work and work-related skills clearly, specifies a broad range of work skills applicable to a wide range of jobs, sets clear standards for mastery of skills, and documents client progress. Directors of vocational training facilities will find an objective means to accountability, cost effectiveness, and appropriateness of programs and staffing. Also, the measure provides a means of outlining

an objectively specified curriculum for prevocational and vocational skills. The program evaluation specialist will find an objective means of documenting client or trainee progress, and accordingly effectiveness of training procedures.

Subsets of the instrument can be used. Only those skills perceived as relevant to the individual client are assessed, and others are omitted. This can be done without distorting any global score of vocational competence because the instrument is criterion referenced (specific behavioral competence) rather than norm referenced (scores compared to those of a norm group). Likewise, additional skill objectives can be written in a manner that carefully specifies the condition and instruction, the behavior, and the standard.

The VBC may also be used to construct individualized written plans for other students, trainees, or clients as mandated by federal legislation. In education, for example, it can aid in the development of the Individualized Education Program (IEP), which is required for all handicapped children. It can also be used in the development of the Employment Development Plan (EDP), which is recommended for all persons served by the Comprehensive Employment Training Act (CETA).

ADMINISTRATION

The use of the VBC requires professional judgment, but paraprofessionals may easily be trained. The VBC can be administered as often as necessary to maintain an accurate view of the client's competence. In some instances a single assessment of skill objectives may be sufficient, but in other cases a periodic assessment of client or trainee skills is desirable. Administration is achieved by observing the client; the time necessary varies depending on the number of objectives deemed appropriate for the individual client.

SCORING

A Skill Summary Chart and a Skill Objective Profile are developed. The Skill Summary Chart is used as an overall record of all the skill objectives achieved by the client in all seven categories. The skills mastered by the client in initial assessment and in training, as well as the date the skill was demonstrated or completed, are entered on the Skill Summary Chart. For any skill objective mastered, a "+" is entered. For any objective failed in initial assessment, a "-" is entered. The date training was begun and the date training was completed (the skill was mastered) are recorded. The summary column

provides a concise view of the skill objectives mastered in either initial assessment or training, and so summarizes the individual client's progress to date in each category.

The Skill Objective Profile allows for a quick survey of overall client progress in each of the seven categories. The profile is constructed by dividing the number of skill objectives mastered in a category by the total number of skill objectives considered applicable to the client in that category, multiplied by 100. The instrument is hand scorable.

RELIABILITY

The VBC was considered in terms of reliability as stability and reliability as interobserver agreement. Reliability as stability was measured using test-retest procedures (two weeks between tests) for five vocational rehabilitation clients observed by two observers. Five skill objectives were randomly selected from each of the seven categories for evaluation. Stability across all seven categories ranged from 92% to 100%.

The overall mean stability of the VBC was 97%. An index of interobserver reliability was computed by comparing the scores of Observer 1 and Observer 2 at Time 1. Interobserver reliability across all seven categories ranged from 84% to 100%. The overall interobserver reliability of the VBC was 95%.

VALIDITY

The content validity of the VBC indicates how well the skill objectives sample vocational skills. It does not yield a numerical value. Rather, it gives a clear definition of the universe represented and describes the procedure followed in sampling that universe.

Construction of the VBC began with more than 200 behavior checklists collected from rehabilitation facilities and schools. Of these checklists, 21 which contained items related to assessing vocational behaviors were selected. Thus, the development of the VBC was based on suggestions for objectively assessing vocational behavior from a wide variety of training facilities and vocational training personnel spread over a wide geographic area. The VBC is much more comprehensive than the wisdom and experience of a single facility, staff, or vocational training group. Thus, the content validity of the VBC must be considered high.

Criterion-related validity was examined by comparing the VBC with various indicators of vocational competence

perceived as important by employers: essential job skills, desirable employee characteristics, important job-related behavior, and job retention skills. The criterion-related validity with the four sources was .95, 1.0, .96, and 1.0, respectively. This yields an overall average criterion-related validity of .97. Thus, one can be confident that the VBC includes the important and relevant vocational skills.

ADVANTAGES

A major advantage of the VBC is that the skills to be assessed may be adjusted to suit the type of training and the individual needs of the worker or trainee.

LIMITATIONS

Because skill objectives may be added, deleted, and/or changed, the VBC is simply a checklist of skills (criterion-referenced measure); it is not a standardized instrument (norm referenced).

REFERENCES

University of Florida Rehabilitation Research Institute. The vocational behavior checklist measures client abilities. Rehabilitation Brief: Bringing Research into Effective Focus. Gainesville, February 15, 1980, 3 (3).

Walls, R.T. & Werner, T.J. Vocational behavior checklist. Mental Retardation, August, 1977, 30-35.

Walls, R.T., Zane, T., & Werner, T.J. The vocational behavior checklist (experimental edition). Dunbar, WV: Research and Training Center Press, 1979.

AVAILABILITY

Copies of the checklist and other pertinent information can be obtained from:

Publications Department
West Virginia Rehabilitation
Research and Training Center
One Dunbar Plaza, Suite E
Dunbar, WV 25064

CASE SUMMARY VOCATIONAL BEHAVIOR CHECKLIST (VBC)

In almost all cases, it is a misnomer to say that, "the VBC is administered." Virtually no one or no program routinely uses all 344 skill objectives as they are printed in the VBC. It is merely a collection of skill objectives that a program may choose from to help (1) define their program, (2) evaluate client skills at intake, (3) guide client training, (4) evaluate client gains, and (5) evaluate the program. Programs, trainers, and evaluators typically select some skill objectives from the VBC, modify some, and/or write some. At the first of each chapter containing skill objectives, these three options are stated.

1. Deleting skill objectives that are not appropriate.
2. Adding new skill objectives that may be needed. These should be written in the same format as the ones included here. Some blank forms at the end of the chapter are provided for that purpose.
3. Modifying existing skill objectives by adapting (a) conditions, (b) behaviors, and/or (c) standards to suit a client with particular needs or handicapping conditions or to better suit the purpose of training.

Suppose that the work adjustment program at a particular facility selected 15 of the 21 skill objectives from the Interview Skills chapter of the VBC. They used these 15 just as they occurred in the VBC. They modified 3 other skill objectives to better suit the purpose of their program, and they wrote 1 new skill objective that they needed but was not in the VBC. So they had 19 skill objectives in the area of interview skills. Two examples of these skill objectives follow.

INTERVIEWER INTERESTS 2

CONDITION:	Given only the verbal instruction.
INSTRUCTION:	"Name the four things that the interviewer will probably ask you questions about."
BEHAVIOR:	Client will name: (1) previous work experience, (2) education, (3) current skills and (4) personal interest and goals.
STANDARD:	Behavior within two minutes on three of four occasions. Each of the four areas of questions must be named.

HANDICAP II 12

- CONDITION:** Given a simulated job interview and a specific physical handicap of the client.
- INSTRUCTION:** (Request by Interviewer) "Tell me the specific work skills that you cannot do because of your physical handicap."
- BEHAVIOR:** Client will describe one or more specific skills that cannot be done because of the physical handicap. After each skill deficiency described, the client will name one or more related skills that he/she can do.
- STANDARD:** Behavior within 15 minutes in four consecutive interviews. Each skill deficiency described must be directly related to the client's handicap, and must be followed by a description of one or more specific skills (in client's repertoire) that are as similar as possible to the deficient skill.

During the first couple class periods in the work adjustment class at the facility, the instructor conducted several simulated interviews and assessed abilities to accomplish the 19 skill objectives. Client K.R.T.'s skill summary chart after this initial assessment is provided below.

As you can see, K.R.T. showed mastery of skill objective #12 (Handicap II) but had not mastered skill objective #2 (Interviewer Interests). Thus K.R.T. does not need training on skill objective #12. She will need to be trained on skill objective #2 (as well as the others not yet mastered: 1, 3, 4, 5, 7, 8, 9, 10, 13, 14, 15, 17, 18).

The skill summary chart for K.R.T. is a summary of the skill objectives that have been mastered at any particular time. Remember, this is a special skill summary chart that was selected, modified, and written for this facility and this program and/or this client based on the VBC. It is not the exact one found in the VBC. The important things are that (1) the training program is defined (these 19 skill objectives); (2) the skill objectives are clearly specified in terms of condition, behavior, and standard; (3) K.R.T.'s accomplishment of the skill objectives is apparent at any particular time (skill summary chart); (4) training is needed only for those skills that have not yet been mastered; and (5) an objective record of program accomplishment is also available.

Summary	Skill Objective	Initial Assessment		Training	
		+ or -	Date	Date Begun	Date Completed
☐	1 <u>Evaluation Areas</u>	☐	<u>2/17/82</u>	_____	_____
☐	2 <u>Interviewer Interests</u>	☐	<u>2/17/82</u>	_____	_____
☐	3 <u>Job Information</u>	☐	<u>2/18/82</u>	_____	_____
☐	4 <u>References</u>	☐	<u>2/19/82</u>	_____	_____
☐	5 <u>Interview Request</u>	☐	<u>2/17/82</u>	_____	_____
☒	6 <u>Route</u>	☒	<u>2/18/82</u>	_____	_____
☐	7 <u>Appearance</u>	☐	<u>2/18/82</u>	_____	_____
☐	8 <u>Introduction</u>	☐	<u>2/17/82</u>	_____	_____
☐	9 <u>Eye Contact</u>	☐	<u>2/17/82</u>	_____	_____
☐	10 <u>Required Skills</u>	☐	<u>2/17/82</u>	_____	_____
☒	11 <u>Handicap I</u>	☒	<u>2/17/82</u>	_____	_____
☒	12 <u>Handicap II</u>	☒	<u>2/17/82</u>	_____	_____
☐	13 <u>Equipment Skills</u>	☐	<u>2/17/82</u>	_____	_____
☐	14 <u>Work Experience</u>	☐	<u>2/17/82</u>	_____	_____
☐	15 <u>Reasons for Job</u>	☐	<u>2/17/82</u>	_____	_____
☒	16 <u>Client Interests</u>	☒	<u>2/17/82</u>	_____	_____
☐	17 <u>Advancement</u>	☐	<u>2/17/82</u>	_____	_____
☐	18 <u>End of Interview</u>	☐	<u>2/17/82</u>	_____	_____
☒	19 <u>NONVERBAL</u>	☒	<u>2/17/82</u>	_____	_____
☐	<u>20 Follow Up</u>	☐	_____	_____	_____
☐	<u>21 Follow Up</u>	☐	_____	_____	_____

THE VOCATIONAL DIAGNOSIS AND ASSESSMENT OF RESIDUAL EMPLOYABILITY (VDARE) PROCESS

DEVELOPER(s)

The VDARE Process and the VDARE Worksheet were developed by Timothy Field and Jack M. Sink, both faculty members in the Rehabilitation Counseling program at the University of Georgia, in 1979.

PURPOSE

The VDARE Process is designed for job analysis and the assessment of vocational potential.

DESCRIPTION

The VDARE Process uses the Dictionary of Occupational Titles (DOT) and the client's personal history and current level of functioning as information (medical, psychological, social, educational, and vocational) is synthesized to predict vocational functioning potential. The client's work history provides the basis to build an assessment of client vocational functioning capacities. This is accomplished by attaching the job demand characteristics of the client's work history experience (derived from job analysis information on these jobs, using the DOT) to the client as indicators of his/her demonstrated functioning capacities.

The Process is outlined in the following five phases: (1) initial collection of vocationally relevant background data; (2) tracing client's vocational history through the DOT and collapsing the trait-factor profiles from this history into a single Unadjusted Vocational Profile (UVP); (3) alteration of the UVP, trait-by-trait, to reflect the impact of the vocationally relevant client data which results in a tentative Residual Employability Profile (REP); (4) formulating an evaluation plan to collect the necessary medical, psychological, social, educational, and vocational data needed to clarify and finalize the REP; (5) selecting the vocational objective(s), planning services, and completing the VDAPE Technical Data Report.

The Process Worksheet is a four-page display device used to compile and present the information processed. Page 1 is used to record referral and interview data, especially the client's work history. Pages 2 and 3 include the VDARE "grid" for job/client profiling and space for key reference notes concerning differences between UVP and REP. The grid contains space for DOT codes and job

titles; Guide to Occupational Exploration (GOE) Code and worker trait information for each job; UVP, including traits to be clarified; REP, including documentation references; job possibilities; and vocational outcome. Page 4 provides space for objectives and methods for the evaluation plan and service plan.

USE

The process seems appropriate for assessing all clients. It seems to be useful in assessing clients in rehabilitation facilities, educational facilities, public and private rehabilitation settings, and in the assessment of injured workers (e.g., Worker's Compensation, Social Security). It is also applicable to non-handicapped individuals.

The VDARE Process can aid case managers and other rehabilitation professionals in translating client/employee case data into more meaningful terms. The REP is beneficial in several ways: it provides a convenient way of identifying and specifying necessary client evaluations; it provides a convenient and efficient method of incorporating evaluation results in the selection of vocational objectives; and it can be used to determine services necessary to bring the client's present level of functioning into line with the level of functioning required for the most feasible job.

The process is also beneficial to program managers. The vocational outcome profile contained in the VDARE grid aids in planning and finalizing follow-up services. The vocational profile outcome data can also be used for program evaluation and other research endeavors designed to enhance service delivery.

The developers of the Process indicate it is useful for vocational guidance and counseling services in schools and personnel screening in business and industry, as well as for training and promotional practices.

ADMINISTRATION

The completion of the process relies on the client's self-report and clarification of work history, and professional judgment. To administer the process and complete the Process Worksheet, the user must have a functional understanding of job analysis and be trained in the use of the DOT (1977 edition). The procedure relies on personal interview and review of the compiled data, and should take about 30 minutes to administer.

SCORING

No scoring is involved. The VDARE Process organizes and synthesizes pertinent client information.

RELIABILITY

The reliability of this process is dependent upon the accuracy of the client's self-report and related consultive data.

VALIDITY

The validity of the VDARE Process rests on the validity of the data base used. While local job analysis data are ideal, DOT data can be used when local data are unavailable. The validity of the REP rests entirely on the professional judgment of the VDARE Process user and the clarifying data the user secures from allied professionals.

ADVANTAGES

A major advantage of the VDARE Process is that it compliments existing evaluation systems and techniques.

LIMITATIONS

The procedure seems to require 30 minutes to one hour (less with microcomputer software programs).

REFERENCES

Field, J. & Field, T. Job search program: Apple II and IBM PC software for the VDARE process. Athens, Georgia: VSB, Inc., 1982.

Field, T.F. & Field, J. (Eds.). The classification of jobs according to worker trait factor: An addendum to the 1977 edition of the dictionary of occupational titles. Athens, Georgia: The McGreggor Co., 1980.

Field, T., & Field, J. The vocational report (IBM PC software). Athens, GA: VSB, Inc., 1983.

Field, T.F. & Sink, J. Vocational assessment, planning and jobs. Athens, Georgia: The McGreggor Co., 1981.

Field, T.F. & Sink, J. The vocational expert. Athens, Georgia: Burman Printing, 1981.

Vander Veet, D. & Field, T.F. Labor market access. Athens, Georgia: Burman Printing, 1981.

A list of additional references can be obtained from the
VDARE Service Bureau, Inc.

AVAILABILITY

Materials related to the VDARE Process are available from:

VDARE Service Bureau, Inc.
P.O. Box 1945
Athens, GA 30603

CASE SUMMARY VOCATIONAL DIAGNOSIS AND ASSESSMENT OF RESIDUAL EMPLOYABILITY (VDARE)

The VDARE Process is an approach to organizing and synthesizing all relevant educational, psychological, social, and vocational information about a client for the purpose of determining vocational potential. This case illustrates this process through the combination of the client's work history and selected assessment information. Specific job recommendations are presented which confirm this client's potential for employment. To add clarity to this illustration, the material is presented in the following sequence: The Worksheet UVP, the case report, the Worksheet REP, and recommendations.

VDARE PROCESS WORKSHEET

Vocational Diagnosis and Assessment of Residual Employability
for use with the DOT 3rd ed. (1965), or 4th ed. (1977), and their supplements

Name MS. JANE DOE Phone: na
 Street _____ Data Collected By: MR. COUNSELOR
 City, State CLAYTON, GEORGIA Zip Code 30772 Date Info. Collected: AUGUST 1981
 Soc. Sec. # 009-44-7732 other _____ Birthdate 7/3/41 Age 40 Height 5'4" Weight 128

Education/Training

11th GRADE DAYTON CONSOLIDATED DISTRICT, OHIO
HIGH SCHOOL DIPLOMA, UNIVERSITY OF GEORGIA

Work History (Job titles with brief description beginning with last job)	Time Covered Beg./End.	Hourly Wage Beg./End.	Rating S U	Reason Left
BAKERY FINISHER	1972- 1976	4.25 5.10	S	BAD BACK
CANDY PACKAGER	1970- 1972	3.45 3.95	S	BETTER PAY
COIL WINDER	1963 1970	2.10 3.25	S	BETTER PAY

Client's Name <u>Ms. JANE DOE</u>		Physical Demands						Working Conditions							GED		
Data Base 1965 _____ 1977 <u>✓</u> or Local _____		Strength (SLMHV)	Climb/Balance	Stoop/Bend	Reach/Handle	Talk/Hear	Vision	I/O/B	Cold	Heat	Wet/Humid	Noise/Vibs	Hazards	Fumes/Dust/Odor	Reasoning (1...6)	Math (1...6)	Language (1...6)
D.O.T. Code #	GOE Code #	INDUSTRY	D.O.T. TITLE														
Work History		1	2	3	4	5	6	1	2	3	4	5	6	7	R	M	L
929.686-010	06.04-38	BAKERY FINISHER															
920.587-018	06.04-38	CANDY PACKAGER ²															
724.684-026	06.04-23	COIL WINDER															
Unadjusted Vocational Profile (UVP)		M		4		6	I				5				2	2	2
(traits to be clarified)		*	1												2	—	
Residual Employability Profile (REP)																	
(documentation references)																	
Job Possibilities																	
	1																
	2																
	3																
	4																
	5																
	6																
	7																
Vocational Outcome																	
	1																

Vocationally Relevant Information, (Medical, Social, Psychological, Educational & Vocational)

* SEE PLANNING & SERVICES

[illegible]

PLANNING & SERVICES

Evaluation Plan	
Question	Methods
PD-1 ASSESS PHYSICAL FUNCTIONING (ALL PHYSICAL DEMAND TRAITS)	PHYSICIAN
GED-2 ASSESS EDUCATIONAL SKILL LEVELS	PSYCHOLOGICAL - GED
APT. 3 ASSESS BASIC APTITUDES AND CAPACITY	PSYCHOLOGICAL - GATB
TEMP-4 ASSESS ATTITUDES & DISPOSITION FOR WORK	PSYCHOLOGICAL - WR10T VOCATIONAL ASSESSMENT- WORK EVALUATION
Services Plan	
Objectives	Methods

THE CASE REPORT

August 1981

Mr. Rehabilitation Specialist, M.S., C.R.C.
100 Tenth Street
Athens, GA 30603

RE: Jane Client
Dates of Testing: 4/1, 6, 7, 8, 9, 10/81

Dear Specialist:

Thank you very much for the referral of Ms. Client to the work evaluation department of Metropolitan Rehabilitation Services. Included in this letter are the client's Background, the Summary and Recommendations. All specific test results are in the attached Addendum; please refer to that addendum for any questions you may have pertaining to individual test results. In addition, Behavioral Observations are found in the addendum.

Client Background Information

This client is a 40 year old female who is married and currently living with her husband in their own home in Clayton, GA.

On educational history, the client completed the 11th grade at Dayton Consolidated District in Dayton, Ohio in 1956. She performed at the C grade level.

Additional education includes completing all requirements for her high school diploma through the University of Athens, Adult Education Program.

This represents the extent of the client's substantial educational experience.

On vocational history the client was most recently employed by Black Owl of Clayton, GA. where she began employment in August of 1972. Her job title was bakery finisher; and, it was while working on this job with the Black Owl corporation, that on October 24, 1976, while racking pans in a high speed situation, her back began to feel worse. By the time she got home, her back was in a great deal of discomfort.

The resulting physical problems have been diagnosed by Dr. A. Jones, M.D. as degenerated disc.

Treatment has included: hospitalization, myelogram; diseograms, physical therapy, cortisone treatments; and muscle relaxers.

On review of the client's medical history, the client has allergy reactions and has injections once a month; she also has migraine headaches (once or twice a month).

The client is currently taking the following prescribed medications: Soma Compound (4 times a week) for muscle relaxation, Valium (only on occasion) for muscle spasm.

On social history, (legal, driving, etc.) the client reports not having a driver's license.

Summary

In general, the client's testing results varied a great deal, especially in the area of clerical skills. This is somewhat surprising considering her very adequate reading vocabulary and comprehension levels, and her generally good measured math usage level. Because she was having so much difficulty in following audio-visual instructions, needing very explicit instruction and performing erratically in the testing, the Wechsler Memory-Scale Form One was administered. This was to determine if there may be some disfunction. Results indicated that her short and long term memory are mid-average and intact. Thus, it can be assumed that she has the capability of learning and following new instructions, although the complexity level of such instructions may be at different levels of success.

Her use of math varied to some extent within the same tests. She would miss easy problems and do well on more complex ones. She verbalized at one point a disinterest in bookkeeping/accounting related jobs, and this may also have influenced results of such tests in an adverse way.

Work sample results, as well as aptitude tests, do indicate that Ms. Client is most successful on most tasks that are of minimal complexity and do not require a high degree of decision making. Thus, such jobs as would require more complex independent judgment, without structured guidelines, would likely best be avoided.

It is the opinion of the VRS Vocational Psychologist, based on MMPI results, and interaction with the client, that Ms. Client may well have been under a great deal of anxiety while here. This anxiety could well have had an adverse affect on overall task performance. Related to that, the client has performed jobs in the past of a basically routine, repetitive, structured nature, with readily defined standards of quality and

performance. With this work background, she may have felt somewhat uncomfortable in tasks requiring a great deal of independent judgment on her part.

Ms. Client performed most adequately on clerical tests requiring little judgment and mostly on the comparing/contrasting/sorting nature: coding, checking, filing and telephone answering/message taking. She also performed very well on simple manually-oriented tasks (assembly), requiring the use of both upper extremities, and gross and precision tool usage.

The client's interest in surgical nursing seems inappropriate primarily based on her documented physical restrictions and complaints, compared with the physical demands of a nurse. There is also some question of her ability to learn the complex duties of a nurse, and this could not be addressed without intellectual testing. Her physical ability to function as an inhalation therapist is also questionable, based on the equipment (respirators, mechanical ventilators, environmental control systems, etc.) that must be used and moved around. There are questions yet of her ability to learn the complexities of the work, as well, which would have to be answered through intellectual testing.

Requirements of a computer operator include being skilled in the use of words and having high accuracy and attention to clerical details. They must also be able to run and control the machines as well as enter exacting information. Operators usually stand and walk to perform their tasks and may have to lift 50 lbs. or more to load the machines with paper. Based on clerical testing and lifting restrictions, her appropriateness for such a job is questionable.

Based on the client's past work history as a bakery finisher (929.686-010), candy packager (920.587-018) and coil winder (724.684-026) she has the residual Transferable Skills including:

motor coordination to carry out standardized tasks; finger and hand dexterity to position, feed and otherwise work with objects in a standardized manner; spatial and form perception to perceive differences in tangible matters; accuracy in attention to detail; and a disposition to work of a routine, repetitive nature.

Based on work sample/psychometric/psychological testing, Ms. Client has the following major vocational assets:

1. Average measured short/long term memory function.
2. Good measured reading vocabulary/comprehension levels.

3. Generally adequate measured math usage levels.
4. Average to above average measured potential in the basic clerical functions of coding/checking.
5. Competitive and above level accuracy in the clerical functions of telephone answering/message taking, alphabetical filing and basic bookkeeping.
6. Fair to good potential for counter-sales jobs, including the use of credit card imprinting devices.
7. Competitive level speed in the use of basic hand tools for bench assembly/disassembly operations.
8. Average accuracy in tasks involving precision electronic assembly operations.
9. Good attendance and punctuality pattern.
10. Friendly, cooperative manner.
11. Adequate hearing in the range of speech.
12. Neat appearance.
13. Measured good potential to gain competitive typing skills.

Primary vocational limitations include:

1. Presence of behaviors commonly associated with apparent physical discomfort, especially of a verbal nature.
2. Observed need for high degree of reinstruction and very explicit instruction.
3. Poor measured aptitudes in spelling accuracy and language usage.
4. Inconsistent performance in tasks of math usage nature (such as missing easy problems and getting the hard ones correct).
5. Below competitive level speed in tasks involving routine clerical comparisons.
6. Below competitive level speed in the clerical tasks of alphabetical filing and mail sorting; below competitive accuracy in the clerical functions of mail sorting.

7. Far below competitive speed/accuracy in tasks involving quality control/inspection operations, including the use of precision measuring instruments.
8. No driver's license.

Client's Name Ms. JANE DOEData Base 1965 _____ 1977 ☒ or Local _____

D.O.T. Code # _____ GOE Code # _____ INDUSTRY _____ D.O.T. TITLE _____

	Physical Demands						Working Conditions							GED		
	Strength (SLMHV)	Climb/Balance	Stoop/Bend	Reach/Handle	Talk/Hear	Vision	I/O/B	Cold	Heat	Wet/Humid	Noise/Vibs	Hazards	Fumes/Dust/Odor	Reasoning (1...6)	Math (1...6)	Language (1...6)
Work History	1	2	3	4	5	6	1	2	3	4	5	6	7	R	M	L
1																
2																
3																
4																
5																
6																
Unadjusted Vocational Profile (UVP)	M		4		6	I				5				2	2	2
(traits to be clarified)																
Residual Employability Profile (REP)	S		3	4		6	I							2	2	2
(documentation references)	1		2	3										1		
Job Possibilities																
1																
2																
3																
4																
5																
6																
7																
Vocational Outcome																
1																

Vocationally Relevant Information, (Medical, Social, Psychological, Educational & Vocational)

PD-1 RESTRICTED to 10[#] - DR. JONES
 2 NO REPEATED BENDING OR
 STOOPING - DR. JONES
 3 NO HEAVY PUSHING/PULLING - DR. JONES

GED-1 CONFIRMED by the NELSON DENNY
 & NRAT TESTS

[illegible]

A-1 ALL APTITUDES CONFIRMED, OR
ADJUSTED, BASED ON DAP & VALPAR UNITS
WA-1 PEOPLE EVIDENT FROM INTERVIEW &
CA II
2d3 ALSO ROUTINE & PRESTIGE ACTIVITIES
T-1 CONFIRMED BY VALPAR TESTING &
BEHAVIORAL OBSERVATIONS

RECOMMENDATIONS

Based on her past work history, testing results and documented restrictions ("10 lbs and bend only on an infrequent basis; no repeated bending or stooping, heavy pushing, pulling or reaching" - Dr. Jones, April 2, 1981), the following recommendations are made:

1. Ms. Client should take driver's training lessons and become a licensed driver. This would allow her more flexibility in seeking places of employment, increasing her chances of becoming employed and more independent in general.
2. Direct job placement or on the job training situations be sought in the following areas. Due to likely anxiety on the client's part, a period of adjustment may be needed, including the possibility of initial part-time work.
3. Selecting a job(s) according to some rationale is an important consideration. In this case, jobs are searched in a similar industrial group (700's & 900's) and within a certain DPT's range (562-687). Since there is a strong indication for "clerical" activity, the 200's are added also. The job possibilities are:

Job Alternatives	Rationale
Photocopying Machine Operator (selected placement)	Past experience with operating certain industrial equipment, measured clerical/office interests, appropriateness for her physical limitations, adequate dexterity.
Inventory Clerk Shipping Checker Counter Sales Clerk Hotel Desk Clerk Verifier-Checker	Good measured ability to make accurate clerical comparisons and sort accordingly, demonstrated ability to learn basic clerical functions, adequate reading/math abilities, generally light and sedentary in nature with minimal physical arm movements, measured interest in clerical/office/sales occupations.
Typist, general Keypunch Operator General Office Clerk	Demonstrated the ability to learn typing skills, friendly personality, good results on the telephone answering/message taking test, stated interest in word processing, jobs of a sedentary or light nature, accuracy in making routine clerical comparisons.

4. Related to the last three jobs above, Ms. Client would require a short-term intensive typing course to get her to a competitive level. She would also benefit from remediation in spelling and grammar. Training should take place in a situation which allows for physical tolerance building and for reduction in likely initial anxiety. A part-time job position, or training center in business skills that allows for such work hardening/adjustment, would be very helpful.
5. Bookkeeping, billing clerk or similar training position could be pursued if math remediation was given to increase her consistency of use and help her confidence in its use. This could change her initial negative reaction to such work.
6. Due to the likely existence of anxiety in this client, any training or direct placement should offer a structured learning situation, with firm but supportive supervision. This would help to alleviate her feelings of insecurity by allowing her to know the exact job requirements; the supervision would allow for immediate feedback on her progress.

I trust that this information will be of assistance to you in your continued vocational planning with Ms. Client.

Sincerely,

Allen C. Counselor, M.S.
Certified Rehabilitation Counselor
Director--Evaluation and Training Services

Acknowledgement and appreciation is extended to Mr. Alden Bjorkland and Dr. Phillip Haber of Metropolitan Rehabilitation Services, Inc. of Minneapolis for the development of this case study.

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LB1131

W52 Functional assessment:
 Tenth Institute on
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 St. Louis, Missouri;

LB1131

W52 Functional assessment:
 Tenth Institute on
 Rehabilitation Issues.
TITLE St. Louis, Missouri;

DATE DUE	BORROWER'S NAME

DEMCO

